PACIFIC LINGUISTICS
Series C - No. 85

VERBAL CONSTRUCTIONS AND VERBAL CLASSIFICATION IN NATAORAN-AMIS

by
Teresa M. Chen

Department of Linguistics
Research School of Pacific Studies
THE AUSTRALIAN NATIONAL UNIVERSITY

Chen, T.M. *Verbal constructions and verbal classification in Nataoran-Amis.*
C-85, iv + 300 pages. Pacific Linguistics, The Australian National University, 1967. DOI:*10.15144/PL-C85.cover*

PACIFIC LINGUISTICS is issued through the Linguistic Circle of Canberra and consists of four series:

SERIES A - Occasional Papers
SERIES B - Monographs
SERIES C - Books
SERIES D - Special Publications

All correspondence concerning PACIFIC LINGUISTICS, including orders and subscriptions, should be addressed to:

The Secretary
PACIFIC LINGUISTICS
Department of Linguistics
Research School of Pacific Studies
The Australian National University
G.P.O. Box 4, Canberra, A.C.T. 2601
Australia

First Published 1987
Typeset by Anne Rees
Printed by A.N.U. Printing Service Bound by Adriatic Bookbinders Pty Ltd

The editors are indebted to the Australian National University for assistance in the production of this series

This publication was made possible by an initial grant from the Hunter Douglas Fund

ISSN 0078-7558
ISBN 0 85883 331 X

TABLE OF CONTENTS

Chen, T.M. *Verbal constructions and verbal classification in Nataoran-Amis.*
C-85, iv + 300 pages. Pacific Linguistics, The Australian National University, 1967. DOI:*10.15144/PL-C85.cover*

CHAPTER 1

INTRODUCTION TO THE AMIS LANGUAGE

1.1 General Information

The Amis language is spoken by 89,802 people (as of 1964; see Wei and Wang 1966) on the island of Formosa. The Amis, as an ethnic group, are the most numerous of all the aboriginal groups of Formosa, constituting 38.3% of the total Formosan aboriginal population. In terms of the size of the geographical area they inhabit, the Amis rank fourth among the aboriginal groups, coming after the Atayal, the Bunun and the Paiwan people. This can be explained by the fact that the other three groups inhabit the mountain region and have dispersed settlements. The Amis people, on the other hand, inhabit a fairly continuous area along the eastern coastal plain living in concentrated settlements.

The Amis people occupy a long narrow band of lowland, the Tungtai Rift Valley, running between the Central Range and the Coastal Range of Formosa, extending from the Takili River in the northern part of Hualien District to the coast of Hengch'un, reaching the southernmost point of P'ingtung. They call themselves "Pangcaq" [paŋtsaʔh] though the name "Ami" or "Amis" has become established in the literature. The name "Ami" may come from their word for the first person plural exclusive pronoun: ami. Indeed it is highly probable that upon their first encounter with outsiders they had used this pronoun to refer to themselves and thus given the impression that it was the name of the tribe. Another conjecture, favoured especially by my elderly informant, Kilang Tacio (also known as Chi-ming Lee and Kiomin Sakata), is that the name "Amis" is derived from their word for *north* or *northerners*: amis. Inhabitants of the Taliki River basin are generally called "Amis Pangcaq" or simply "Amis" by their own people. After the northern group came into contact with outsiders and became known as "Amis", the name was extended to cover the Pangcaq groups of the central and southern regions as well. Yuan (1969) holds a third view. He claims that the term amis meaning *northerner* was first used by the Puyumas to refer to their immediate northern neighbour. The bordering Southern Pangcaq group in Pinan or T'aitung in turn picked up the term to refer to themselves. When the term was officially adopted, it was extended to other Pangcaq groups as well.

Leaving the credibility of these conjectures to anthropologists and specialists in folklore, we choose to use the name "Amis" throughout this work to refer to both the people and their language. Since the language described here, Nataoran, is a northern dialect, the term is not only convenient but also appropriate.

Chen, T.M. *Verbal constructions and verbal classification in Nataoran-Amis.*
C-85, iv + 300 pages. Pacific Linguistics, The Australian National University, 1967. DOI:*10.15144/PL-C85.1*

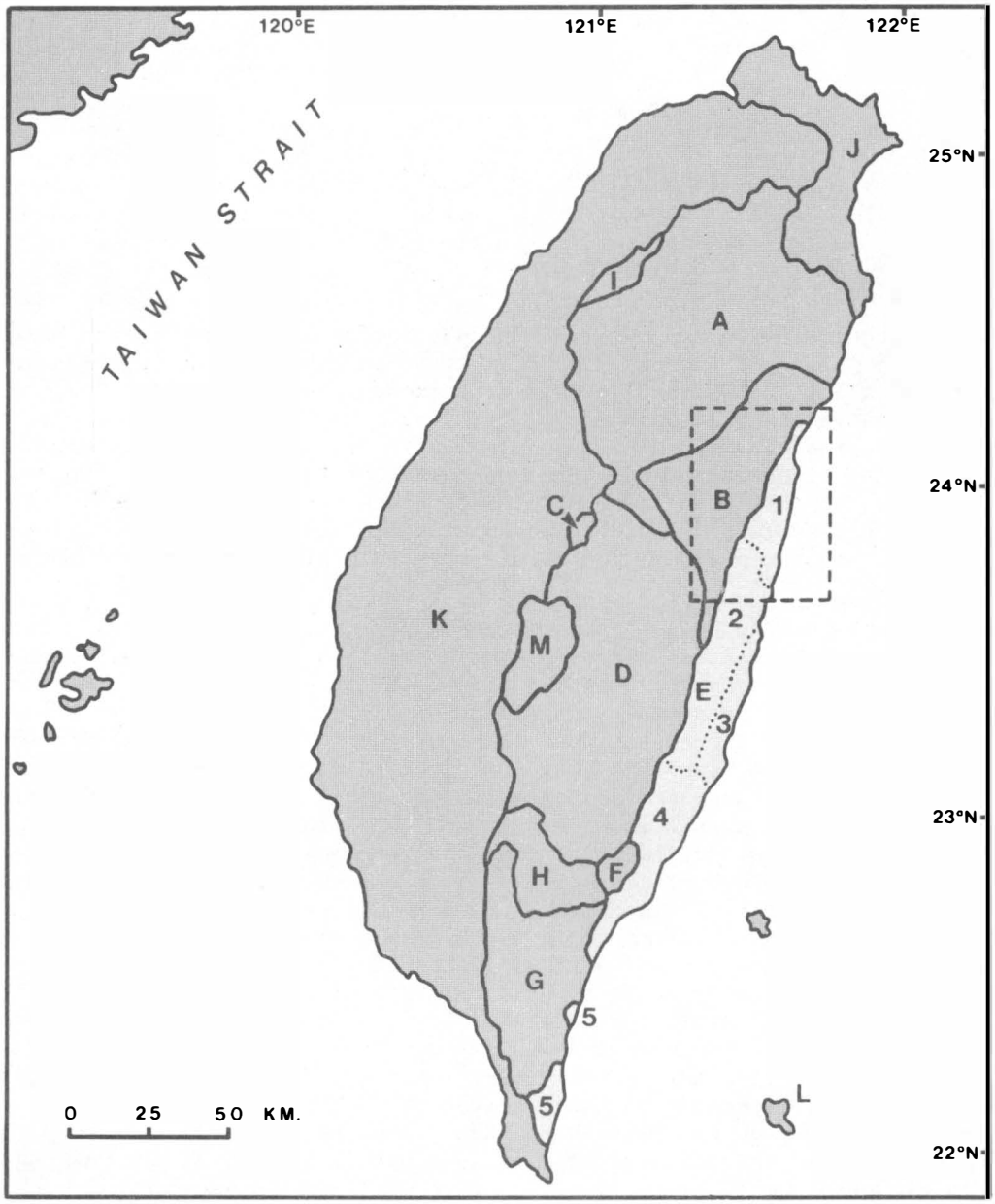


Figure 1.1 Distribution of Formosan Native Ethnic Groups (Adapted from Wei and Wang 1966 and Tsuchida 1976)

LEGEND: A Atayal, B Seedeq, C Thao, D Bunun, E Amis, F Puyuma, G Paiwan, H Rukai, I Saisiyat, J. Kuvalan (extinct), K Pazeh (extinct), L Yami, M Tsou.

AMIS GROUPS: (1) Nanshih, (2) Hsiukulan, (3) Coastal, (4) Pinan, (5) Hengch'un.

[Framed area is enlarged and shown in Figures 1.2 and 1.3.]

The Amis territory is divided into five regions by Japanese and Chinese anthropologists. Extending from north to south along the eastern coastal plain, the Amis group consists of five branches: (1) Nanshih Amis, (2) Hsiukulan Amis, (3) Coastal Amis, (4) Pinan Amis, and (5) Hengch'un Amis. The population of Nanshih Amis is 14,012; Hsiukulan, 29,865; Coastal, 19,849; Pinan, 28,056; and Hengch'un, 1,020 (as of 1964; see Wei and Wang 1966). Wei and Wang have not given any reference nor justification for this subgrouping, assuming that it is common knowledge among Formosan ethnologists. However, Yuan (1969) does mention that Japanese scholars like Inô (1916) had made the division into five groups according to geographical distribution, and cultural and linguistic differences (Yuan 1969:8, 411). Later Japanese ethnologists like Utsushikawa (1934), Asai (1935), and Mabuchi (1953) distinguished only three groups, namely, the Northern, the Central and the Southern groups. On the basis of social structure and kinship organisation, Wei (1961) has proposed a two-way division into a Northern and a Southern group.

By Yuan's account (1969:8-9), the five groups of Amis are geographically distributed as follows (see Figure 1.1):

1. NANSHIH AMIS. The northernmost group, located in the neighbourhood of today's Hualien City, has as its neighbours the Seedeqs of Taroko and the Kuvalans who moved into Yilan at a later date and have been absorbed by the Chinese there. Included in this group are 20 settlements, located along the coastal strip from Busurin in the north to Makutaai in the south (see Figure 1.2).

2. HSIUKULAN AMIS. This group occupies the narrow strip of land irrigated by Hualien River in the north and Hsiukulan River in the south, between the Central and Coastal Mountain Ranges of Taiwan. Included in this group are settlements known as Tavarong, Vataan, Kivit, and Pairasun. Their neighbours are Tsungao-Atayal and Iwatan of Bunun.

3. COASTAL AMIS. Separated from Hsiukulan Amis by the Coastal Mountain Range, the Coastal Amis group inhabits the eastern coastal terrace and is isolated from the others. Included in this group are settlements known as Tingalao, Vakon, Makutaai, Tsavue, Tsiukangan, Pesielen, and Malaulaon, extending from north to south.

4. PINAN AMIS. Located in the neighbourhood of today's T'aitung City, Pinan Amis is also referred to as T'aitung Amis. This group has as its neighbours the Puyuma, Bunun, Paiwan, and Rukai groups. There are also colonies of these groups inside the Pinan Amis area. Included in this group are settlements known as Valanngao (Malan), Toran, Torek, Vavokul, Pijoho, and Kantslai.

5. HENGCH'UN AMIS. The continuous geographic distribution of Amis is interrupted by the Paiwan and Puyuma groups south of T'aitung. A subgroup of Pinan Amis is cut off from the rest and forms a pocket in Hengch'un, toward the southern tip of the island. This group is later referred to as Hengch'un Amis.

Wei and Wang (1966:37), in regard to migration history of Formosan aboriginal tribes, mention that, in the seventeenth century, the Amis groups were forced to move toward the eastern coast by the Seedeqs from the north, the Bununs from the west, and the Puyumas from the south. When the Han Chinese arrived in the east coast in the early nineteenth century, the Amis territory was further reduced to a narrow band in Hualien and T'aitung districts. By that time, Hengch'un Amis was formed as a result of frontier movements by the Puyumas, Paiwans, and Rukais that successfully cut them off from the Pinan Amis group.

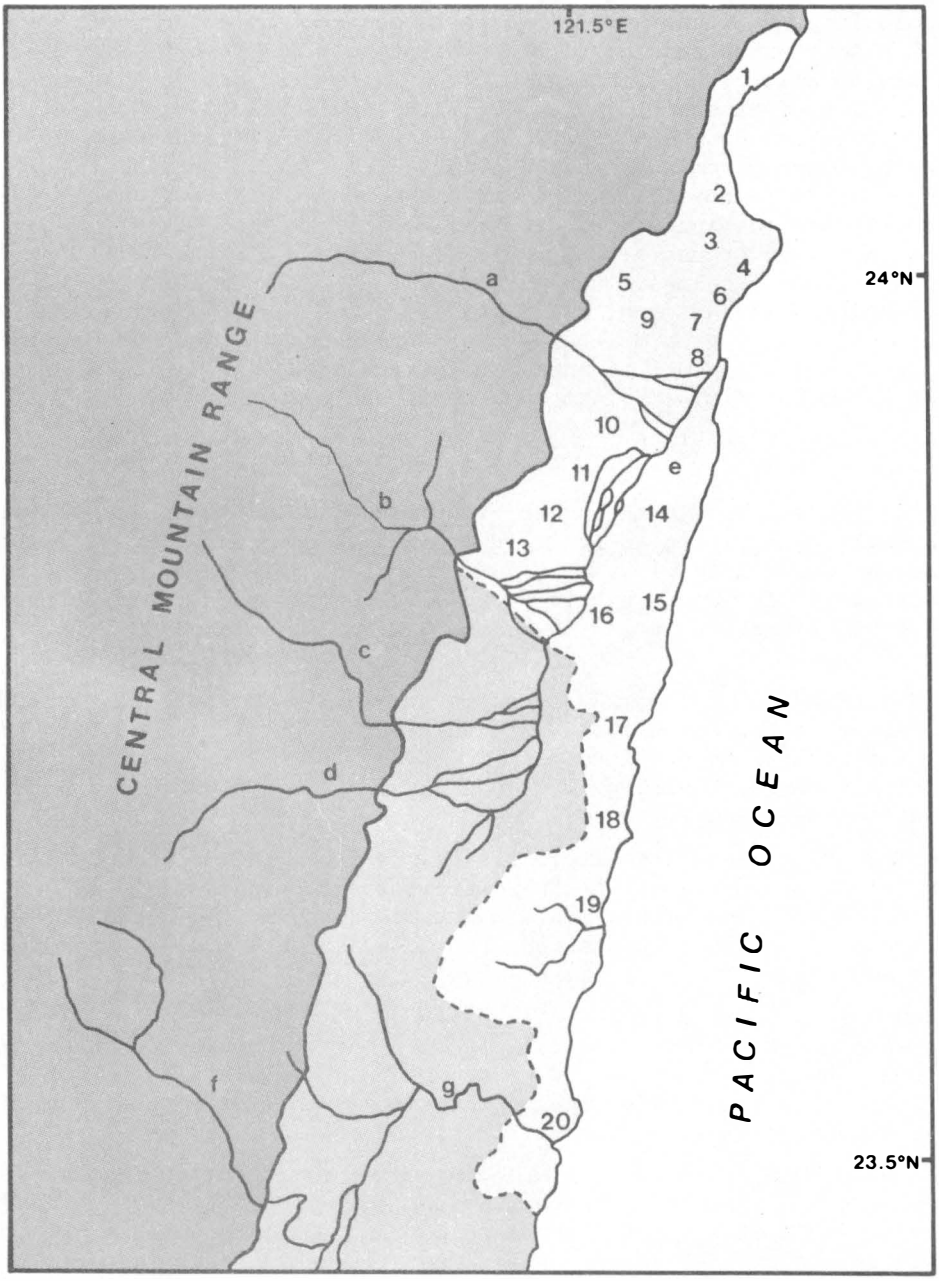


Figure 1.2 Settlements of Nanshih-Amis (Amis names)

LEGEND: 1 Busurin, 2 Sumadas, 3 Varvaran, 4 Parek, 5 Tsikasowan, 6 Tsipaukan, 7 Pokpok, 8 Ridao, 9 Nataoran, 10 Vanaxo, 11 Manran, 12 Rinaxa, 13 Taokak, 14 Daurek, 15 Tsiwidian, 16 Tsirakaran, 17 Karoroan, 18 Patorongan, 19 Vakon, 20 Makutaai.

RIVERS (Chinese names): a Mukua River, b Shoufung River, c Wanli River, d Ma-an River, e Hualien River, f Hungyeh River, g Hsiukulan River.

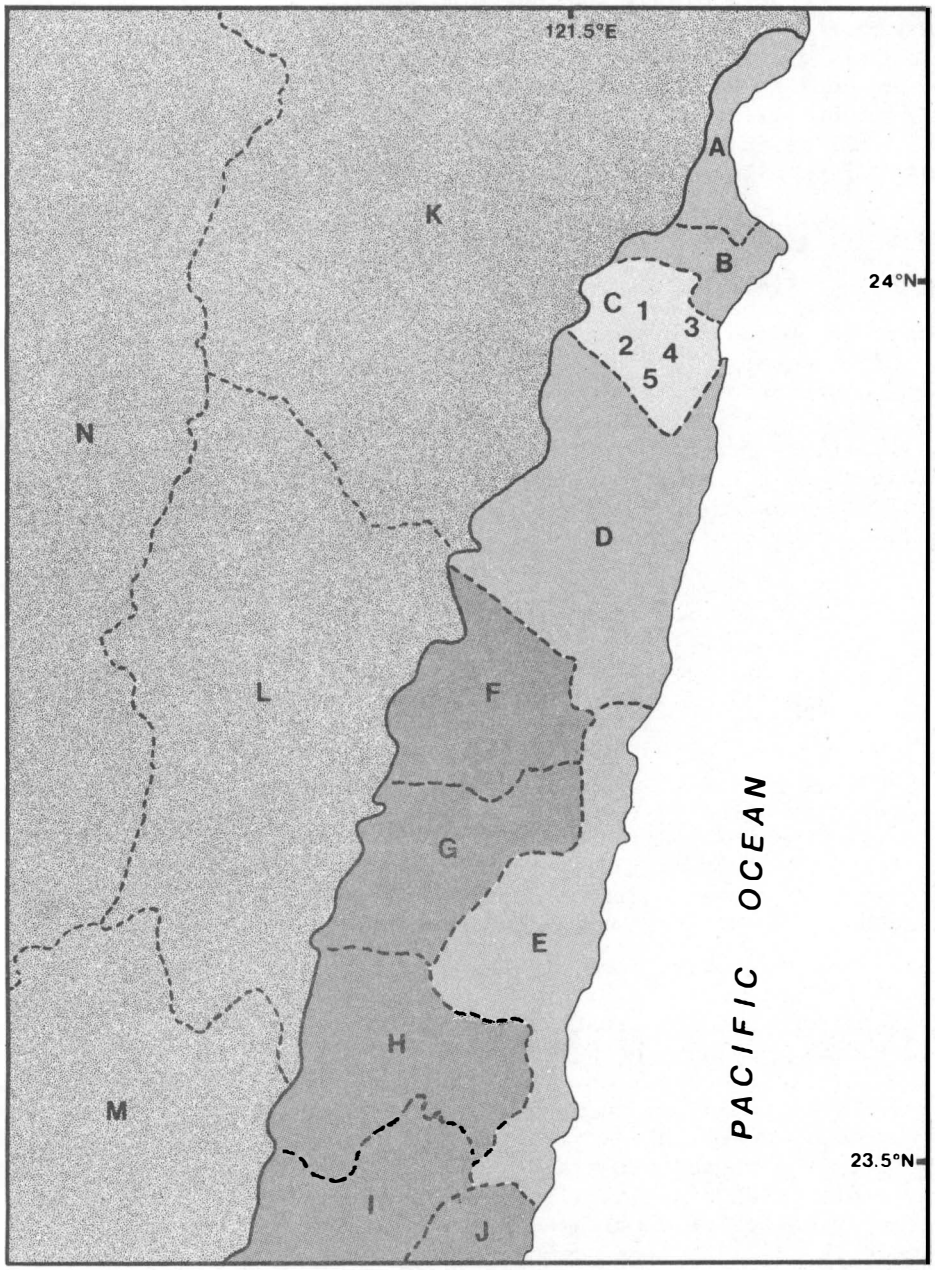


Figure 1.3 Settlements of Nanshih and Hsiukulan (Chinese names)

LEGEND: A Hsinch'eng, B Hualien City, C Chi-an, D Shoufung, E Fungpin, F Funglin, G Kuangfu, H Juisui, I Yuli, J T'aitung District K Hsiulin, L Wanjung, M Chohsi, N Nant'ou District.

A, B, C, D, E = Nanshih Region; F, G, H, I, J = Hsiukulan Region

NATAORAN VILLAGES: 1 Peich'ang, 2 Ich'ang, 3 Nanch'ang, 4 Taohsiang, 5 Yunghsing.

Nataoran-Amis, the northern dialect under investigation, is spoken in the Nanshih region. According to the census taken in 1964, there are 1,813 speakers of this dialect. Nataoran-Amis settlements are located in Chi-an County in the near suburb of Hualien City, forming a cluster of five villages. The names of these villages are: Peich'ang, Ich'ang, Nanch'ang, Taohsiang, and Yunghsing. All my informants came from the village of Nanch'ang, approximately five miles from downtown Hualien City (see Figure 1.3, area C).

1.2 Linguistic Affinity

That Formosan languages belong to the Austronesian family has long since been established (for details, see Dyen 1971b and Tsuchida 1976:1-2). The geographical position of Formosa in relation to the other areas of Southeast Asia in which Austronesian languages are spoken is seen in Figure 1.4. The linguistic position of the Formosan languages as a whole in the Austronesian family, however, is not clear. Most attempts at classification have placed Formosan languages as an early offshoot or a major branch of the Austronesian languages (cf. Haudricourt 1962, 1965; Dyen 1965a, 1971b; Dahl 1976; and Blust 1977).

1.2.1 The Position of Formosan Aboriginal Languages in the Austronesian Language Family

The few diachronic studies to date, most of which are based on secondary sources, suggest that evidence from Formosan languages could significantly after the currently accepted reconstruction of the Proto-Austronesian (PAN) sound system. Capell (1962) points out that an outstanding problem within the Indonesian group of Austronesian languages concerns more detailed descriptions of the Formosan languages, their comparative morphology, and the relationship of these languages to the rest of Austronesian.

Dyen's lexicostatistic study (1965a) of these languages indicate high internal diversity and low internal and external cognate percentages. If the method of lexicostatistics is to be trusted, Dyen's observation can then be construed as follows: Formosa may have been one of the oldest areas of Austronesian settlements. Yet, in a paper entitled "The Position of the Malayopolynesian Languages of Formosa" (1963), Dyen has an alternative suggestion that Formosan languages "probably constitute a single family" (Dyen 1963:262) because indications from the vocabularies are that the Formosan languages are in fact much more closely related genetically than one might think. The evidence itself is simply not convincing enough for us to take a stand between diversity and homogeneity. By 1971 Dyen seemed to have moved toward the homogeneity assumption by conceding that the high diversity among Formosan languages is "likely to prove to be due to error in the procedure..." (Dyen 1971a:15). The lexicostatistic procedure has lent itself to so many different conclusions for Dyen that one cannot help wondering about its validity.

According to Dyen (1965a), Formosan aboriginal languages form two separate groups: the Atayalic subfamily and the East Formosan Hesion, with Atayalic classified as an independent primary member of the Austronesian linkage apart from Malayo-Polynesian and as one of the two non-Malayo-Polynesian groups (the other one being Enggano) outside of the Oceanic area; and the East

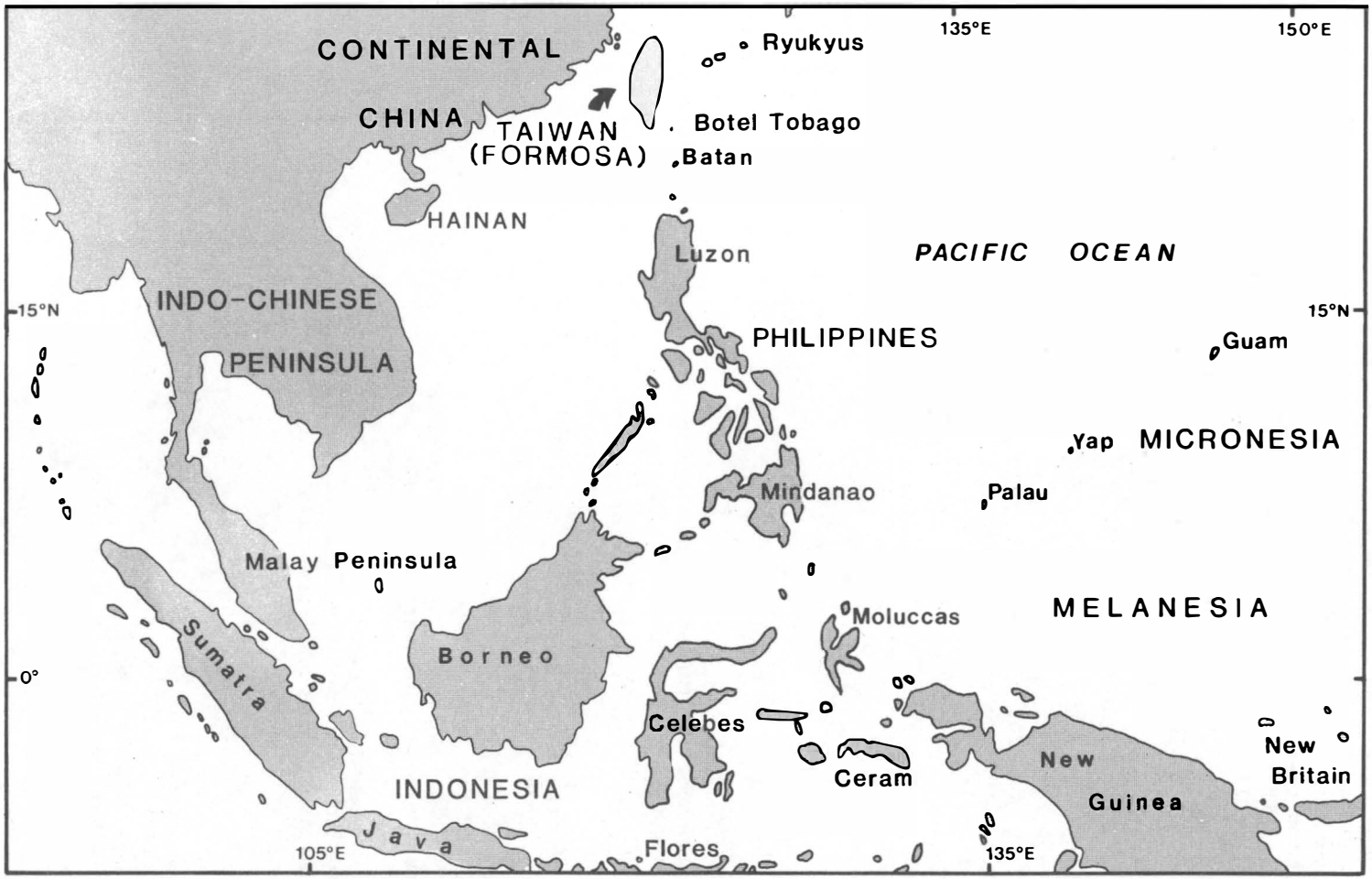


Figure 1.4 Map of Southwestern Pacific Area

Formosan Hesion placed under the Malayo-Polynesian group as one of the seven distinct subgroups of this linkage (see Figure 1.5). Again, Dyen's proposal regarding the external genetic relationship of Formosan languages based on lexicostatistic findings is simply not convincing.

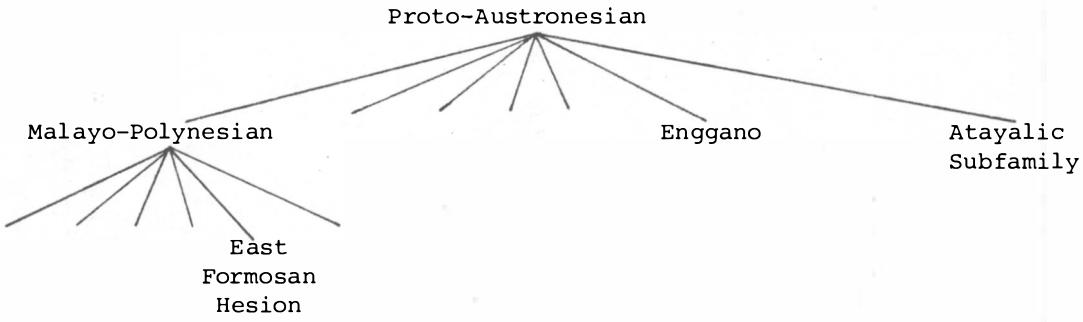
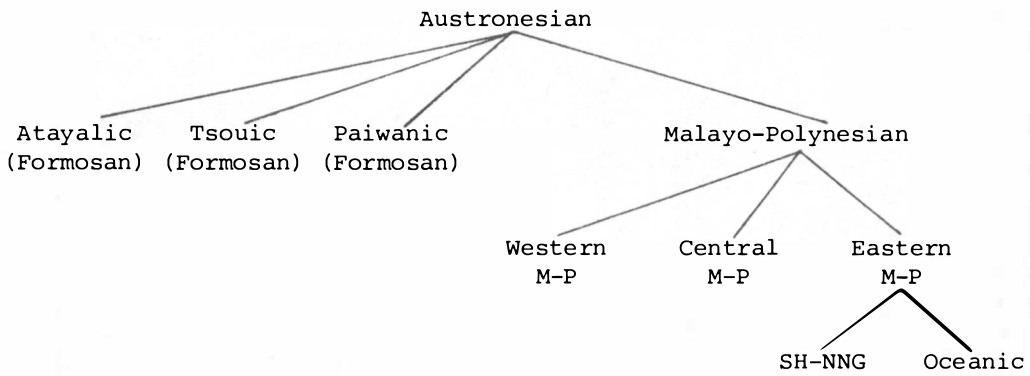


Figure 1.5 Dyen's Proposal for the Position of Formosan Languages in Austronesian Languages (based on Dyen 1965a: 29, 39, and 53)

N.B. The number of branches is not necessarily exact. Actually there are 40 branches from Proto-Austronesian.

Blust (1977) presents a different picture of subgrouping with Atayalic, Tsouic, and Paiwanic branching off as three independent branches of Austronesian, against a fourth branch labelled as Malayo-Polynesian (see Figure 1.6).



ABBREVIATIONS: M-P: Malayo-Polynesian
SH-NNG: South Halmahera-North New Guinea

Figure 1.6 Blust's Subgrouping of the Austronesian Language Family (adapted from Blust 1977:2)

Except for the treatment of Atayalic, Tsouic, and Paiwanic as three distinct subgroups, Blust's subgrouping is not inconsistent with Dahl's (1973) which shows the Austronesian (AN) family at the higher level as follows:

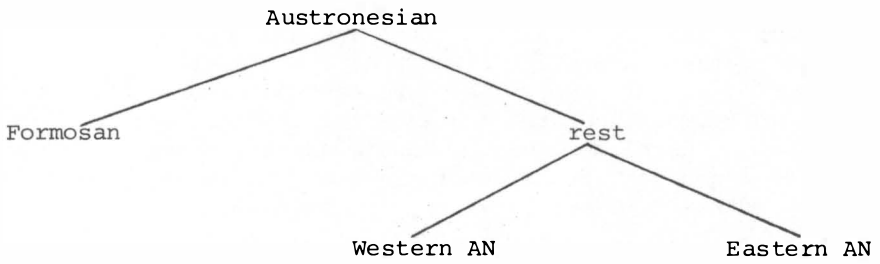


Figure 1.7 Dahl's Subgrouping of AN (Adapted from Dahl 1973:124 and Blust 1977:7)

Blust attempts to justify his picture of genetic relationships within the Austronesian family by considering the evidence on which PAN pronouns are reconstructed. The bipartition into a Malayo-Polynesian subgroup and one or more primary subgroups in Taiwan is based on 1) the Second Austronesian Politeness Shift (i.e., the shift of +-mu, but not +kamu from 2pl. to 2sg. in PMP), and 2) the following paradigmatic levelling:

	PAN	PMP	
1	(k)ami	(k)ami	*we* (excl.)
	amen	amen	*ours* (excl.)
2	(k)ita	(k)ita	*we* (incl.)
	iten	aten	*ours* (incl.)

In their introduction to the *Myths and Traditions of the Formosan Native Tribes* (1935), Ogawa and Asai have made a comparison of the Formosan aboriginal languages with the Indonesian languages. According to them, the languages of the Formosan aborigines are closely related to the Indonesian languages. Their list of cognate words looks quite convincing indeed, but they do not indicate how this relation would stand against further comparison with other Austronesian languages.

So far, quantitative methods have not provided us with a definite answer as to the external relationship of the Formosan aboriginal languages. Dyen (1970), among others, feels that where quantitative methods have failed, qualitative methods may prove to be useful. Detailed descriptive studies of Formosan aboriginal languages would be necessary before we could make comparative studies and substantiate any claims of internal and external relationships. The so-called qualitative method as formulated by Brugmann (1884) in relation to the subgrouping of Indo-European has been applied to the Austronesian languages by a number of linguists with varying degrees of success. Grace (1959) and Pawley (1966, 1967) have gained much insight into the relationship

of Oceanic languages by applying the qualitative method. Wolff and Wolff (1973), Walton (1977), Zorc (1974a, 1974b, 1977) and Reid (1978a, 1978b, 1979) have also demonstrated the relevance of such a method to the problem of subgrouping for Philippine languages.

The qualitative method involves more than mere cognate recognition. It examines the linguistic structure of the language under consideration to search for exclusively shared linguistic features and common innovations. If it can be discovered that a substantial body of features in phonology, morphology, syntax, and lexicon is exclusively shared by some or all of the Austronesian languages in Formosa, we are then in a position to formulate a subgrouping hypothesis for these languages. Such qualitative studies should also be extended to languages of the Philippines and Indonesia to test their Formosan linkage. Moreover, there is Benedict's Austo-Thai hypothesis (Benedict 1966, 1967a, 1967b, 1975) to be considered. Eventually explicit procedures would have to be outlined and tested for all languages which are known or suspected to be Austronesian in order to pinpoint the position of Formosan languages among them. Meanwhile, nothing definitive can be said. However, linguists who work with Western Austronesian and Asiatic languages are paying more and more attention to Formosan languages, as evidenced in the works of Benedict (1976), Blust (1977), Dahl (1976), Dyen (1965b, 1971, 1974), Pawley and Reid (1976), Reid (1978a, 1979), Stanley (1974), Starosta (1974), Tsuchida (1976), Yamada (1974), and Zorc (1977). Formosan evidence is much sought after for historical reconstruction and for the verification of various homeland and subgrouping hypotheses (cf. Dahl 1976:124-126).

As the subsequent chapters may show, Amis is grammatically very similar to languages of the Philippines. Even though I am not pursuing comparative studies in this work, it is hoped that the Amis material collected and presented here may prove to be useful for linguistic classification of the Formosan languages as well as providing for the Austronesian family the kinds of evidence which Brugmann requires for drawing reliable conclusions regarding subgrouping, namely, "sound, flectional, syntactic, and lexical" evidence (Brugmann 1884:253).

1.2.2 The Position of Amis among Formosan Aboriginal Languages

In 1936, Erin Asai in his article on the language of the Yami tribe on Botel Tobago Island, presented a classification of the Formosan languages as shown in Figure 1.8.

According to this classification, Amis stands in isolation as the only member of the Amis group, distinct from Bunun, Tsou-Paiwan, and others. Together there are five groups: (1) the Northern group including Atayal, Seedeq, and Saisiyat; (2) the Bunun group; (3) the Tsou-Paiwan group including Tsou, Saaroa, Kanakanavu, Paiwan, Puyuma, and Rukai; (4) the Amis group; and (5) the Batan group including Yami of Botel Tobago Island and Batan of the Philippines (see Figure 1.4). Basically, Asai's division corresponds to Ogawa and Asai's earlier division of Formosan languages into twelve subgroups: Atayal, Seedeq, Saisiyat, Bunun, Tsou, Saaroa, Kanakanavu, Paiwan, Puyuma, Rukai, Amis, and Yami.

Raleigh Ferrell (1966, 1969) has proposed a classification of the Formosan aboriginal cultures into three major groups which agrees with the linguistic divisions suggested by Dyen (1963, 1965a, 1966). According to the

Dyen-Ferrell classification, two of the three groups, namely, the Atayalic and the Tsouic, are linguistically distinct from each other and from other Formosan groups. Within the remaining third category, which Dyen has variously called "F3" (1963), "East Formosan Hesion" (1965a), and "Catenate Formosan" (1965c), but which has been labelled as "Paiwanic" by Ferrell (1969), there is much diversity. Their lexicostatistic percentages show that members of the Paiwanic groups, with the possible exception of the Yami language of Botel Tobago Island, are linguistically more closely related to one another than to members of any non-Formosan groups despite the internal diversity among themselves. In other words, they assume the languages to belong together even though very little evidence of common innovation has been provided to characterise the group.

Subgrouping within the Paiwanic group is largely uncertain. On the basis of his lexicostatistical study, Dyen (1965a) suggested the grouping of Thao, Bunun, Amis, Puyuma, Paiwan, and possibly Kuvalan and Rukai into one linguistic subgroup, and Pazeh and Saisiyat into another. Ferrell, on the other hand, has made a subgrouping based upon the reflection of Proto-Austronesian *t and *C in the Paiwanic languages. By his test, the Paiwanic group is subdivided into Paiwanic I and Paiwanic II, with the former subgroup preserving the distinction between *t and *C and the latter losing it. Ferrell's Paiwanic I languages include Paiwan, Puyuma, Rukai, Favorlang, Thao, Pazeh, Saisiyat, Taokas, and Hoanya. Among the Paiwanic II languages are Amis, Bunun, Kuvalan, Siraya, and Yami. Though it is theoretically plausible for Ferrell to base his Paiwanic II subgrouping upon a single common sound change, it seems nevertheless too hasty for him to draw conclusions about subgrouping from only one parameter. It is desirable to explore several, if not all, possible parameters to see if their results converge. The exact genetic relationship in which Amis stands with the other Paiwanic languages remains to be established.

Ferrell also attempted to subgroup Formosan aborigines on cultural evidence provided by archaeological findings. He has placed Amis with Paiwanic II languages whose speakers share the so-called Littoral Culture Complex (Ferrell 1969:51) that is more similar to cultures of Pacific areas outside of Formosa. Material culture traits such as elevated houses on piles with bamboo walls and thatched roofs, as well as non-material culture traits such as highly developed cosmogonic myths and vast pantheons including powerful spirits of the sea, are reminiscent of more southern and eastern areas of the Pacific.

It is also pointed out that Amis oral tradition admits of arrival in Formosa over the sea. The names of overseas places such as Sanasai, Vasai, Vatan (Batan), etc. have been mentioned, indicating stepping stones, if not the origin, of migrations. Chance migration might have happened again and again, introducing heterogeneous elements into the Amis stock.

Up to this date, the subgrouping of Formosan languages into Atayalic, Tsouic, and Paiwanic seems generally undisputed (cf. Tsuchida 1976:9-15). Taking into consideration Ferrell's arguments for dividing Paiwanic into Paiwanic I and Paiwanic II (Ferrell 1969:25) and for including Kanakanavu, Saaroa, and even Rukai in Tsou (Ferrell 1974:8), we have the composite picture of subgrouping as shown in Figure 1.9.

The internal relationship of Paiwanic languages is unclear. As it now stands, Paiwanic serves as merely a convenient label for Formosan languages that are considered neither Atayalic nor Tsouic. Reliable classification awaits the definition of classificatory features such as "verbal inflection" as suggested

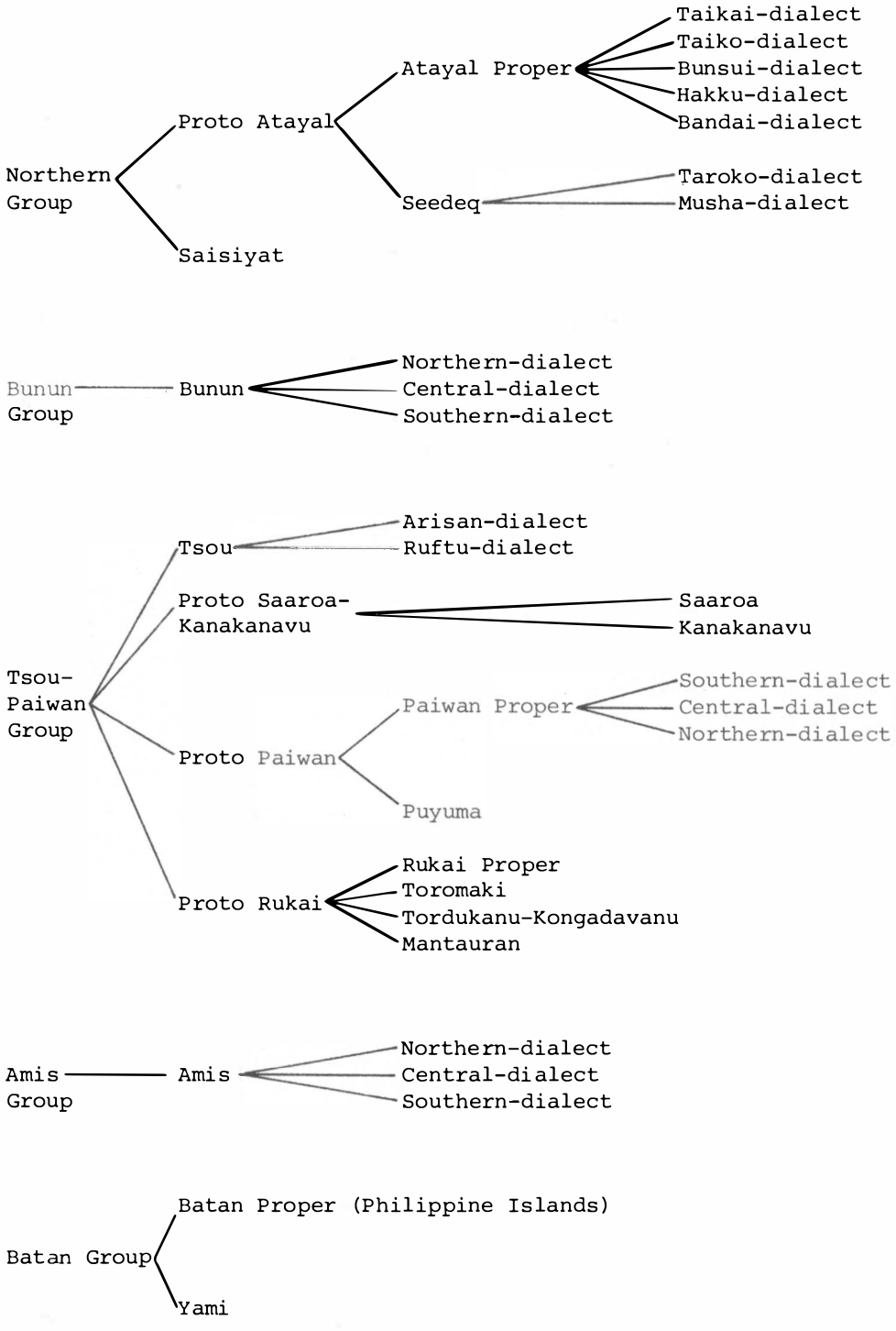


Figure 1.8 Asai's Classification of Formosan Languages

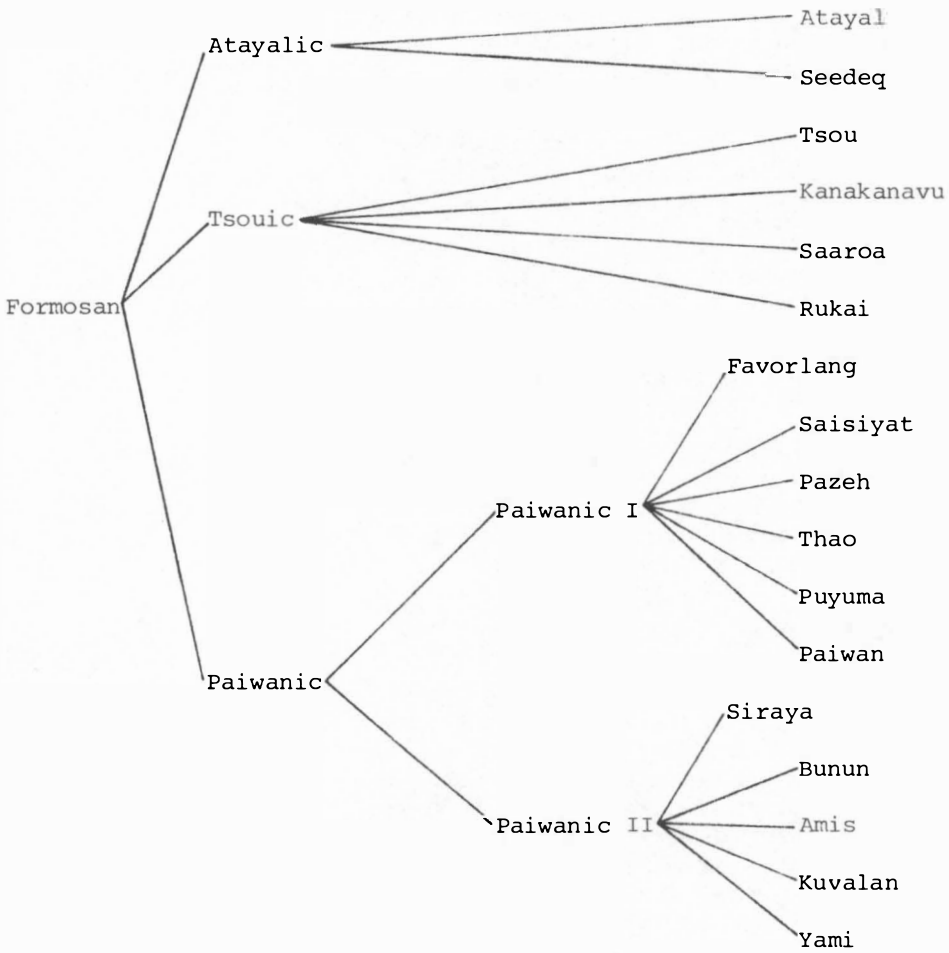


Figure 1.9 Tree Diagram of Formosan Languages
(Adapted from Tsuchida 1976:8, 15; Ferrell 1969:69)

by Ferrell (1970), evidence of sound change (Ferrell 1969, Dyen 1971a), construction marker system (Li 1973, 1978; Reid 1978a), and the use of pronouns (Blust 1977) on the one hand and a better knowledge of the Paiwanic languages on the other. Furthermore, a comparative study of Amis with Philippine and Indonesian languages should shed further light on the problem of internal and external relationships of the Paiwanic group, if it is a group at all. Concerning the subgrouping of Paiwanic languages, two questions remain to be answered: (1) whether the so-called Paiwanic languages do form a group and (2) if so, what is the membership of this group?

Amis has always been classified as Paiwanic, which was suggested by Dyen as being "perhaps more closely related with the languages of the South, in the Philippines and Indonesia, than to Atayal" (Dyen 1965b:287). Based on secondary sources, Isidore Dyen (1965a) has made several observations regarding Amis which can be summarised as follows:

(1) Amis belongs to a subgroup of the Central Formosan Hesion of Malayo-Polynesian languages. This subgroup has variously been labelled as "F3", "East Formosan Hesion", and "Catenate Formosan" by Dyen. It is distinct from the Atayalic and the Tsouic subgroups.

(2) Amis stands in closer relationship to Thao, Bunun, Puyuma, Paiwan, and possible Kuvalan and Rukai than to Pazeh and Saisiyat.

(3) Amis provides the evidence for reconstructing the proto-phonemes *w_1, *w_2, and *N for Proto-Austronesian.

In the main, Ferrell (1969) does not dispute Dyen's classification. However, he places Amis in closer relationship with Bunun, Kuvalan, Siraya, and Yami than with Paiwan, Puyuma, Rukai, Favorlang, Thao, Pazeh, Saisiyat, Taokas, and Hoanya. As mentioned earlier, Ferrell based his subclassification on the reflexes of Proto-Austronesian *t and *C.

1.3 Review of Literature

Although records on the Formosan people and their language go back almost three hundred years, early linguistic work is limited almost exclusively to vocabulary lists, brief collections of texts, and translations of the Bible. Except for the short grammatical sketch of Amis given in Ogawa and Asai (1935), no descriptive analysis has ever been published on Amis. Among the earliest records is Rev. George Candidius' *Account of the Inhabitants of Formosa* (ca. 1630) and Rev. Daniel Gravius' translation of the Gospels of St. Matthew and St. John into Siraya in 1661. Gravius' edition of St. Matthew was revised by Rev. William Campbell who published a new London edition in 1888. Campbell also published several historical accounts of Formosa in the days of Dutch domination and missionary influence.

The earliest record of Formosan aborigines dates back to about 1250 A.D. Chao Ju-Kua's *Chu Fan Chih* (Annals of Barbarian Peoples) is chiefly an account of trade and contact between "the Middle Kingdom" and the "barbarian" peoples outside of China. Most of the descriptions in *Chu Fan Chih* are exactly the same as *Sui Shu Liu Ch'iu Chuan* which predates the former. So it seems that the earliest records of Formosan aborigines are found in *Sui Shu* (Records/ History of the Sui Dynasty) instead, although some scholars debate against it. In the seventeenth century Chinese travellers to Formosa such as Lin Ch'ien-kuang left us some travel notes concerning the customs of the Formosan people, the most extensive of which is the six-part *Fan Su Liu K'ao* (Inquiry into the Savage Customs) in his *T'ai Hai Shih Ch'a Lu* (Record of Investigations in the Taiwan Seas) of 1736 A.D.

During the Japanese occupation which lasted for about fifty years and ended with the end of World War II, Japanese scholars produced meticulous ethnological and linguistic accounts of Formosan aboriginal tribes.

A Japanese-Amis Vocabulary was published in 1934, to be followed only a year later by Ogawa and Asai's *Myths and Traditions of the Formosan Native Tribes* in which folklore was recorded in transcriptions of the native languages with Japanese translation and brief descriptive accounts of the languages. The same year witnessed the publication of Utsurikawa, Miyamoto, and Mabuchi's genealogical and classificatory study of the Formosan native tribes volumes. In 1936, Asai presented his five-group classification of Formosan aboriginal languages, placing Amis in an isolated group.

Both the Dutch and Japanese traditions were revived in post World War II Formosa. The Dutch tradition is preserved by missionaries in the form of vocabulary study and Bible translation. For the Amis language, a pan-dialectal Amis-French and French-Amis Dictionary has been compiled for the dialects of Juishui, Yuli, Kuangfu, Fenglin, and Fengpin by Rev. Antoine Duris of the Roman Catholic Church which claims a great number of converts among the Amis people. In Japan, a persistent interest in Formosan ethnology is manifested in the works of Chichiiwa (1960), Kano (1946, 1952), Kano and Segawa (1956), and Mabuchi (1953, 1954a, 1954b, 1960, 1966). In Formosa, anthropological studies of the Amis tribe include works by Chen Chi-lu and Michael D. Coe (1954), Chen Chi-lu (1961, 1965, 1968), Liu Pin-hsiung et al (1965), Wang Sung-hsing (1961), Wei Hwei-lin (1958, 1965), Wei Hwei-lin and Wang Jen-ying (1966), Chai Chen-kang (1967), and Raleigh Ferrell (1966, 1969). Topics of their investigation include material culture, kinship system and social structure, folklore, art, and migration history of the Amis people. In the area of archaeological study, important research has been carried out by Sung Wen-hsun and his team (1967) and by Chang Kwang-chih (1956, 1963, 1966) and Minze Stuiver (Chang and Stuiver 1966).

Linguistic studies of Amis almost came to a complete halt in the post-war period. Other than the works by missionaries mentioned before, known publications and manuscripts of Amis linguistic materials consist of only a four-page text and a vocabulary by Montgomery (1962) of an unidentified dialect of Amis, Ferrell's 336-word list (1969) which included Malan-Amis among twenty Formosan languages for comparative and classificatory purposes, a few papers on phonetics and phonemic patterns by Torjesen (1964a, 1964b) and some undated outlines and word list by the same author. There is also a 304-word list by Fey (1962) from a central dialect (Ch'engkung), plus two short papers (1964a, 1964b) on morphology. Torjesen does not specify which dialects of Amis he recorded, but one can tell from the vocabulary entries and phonological features that it was probably not Nataoran.

Under the auspices of the National Taiwan University and the Institute of History and Philology, Academia Sinica, the present author was in Taiwan in 1968-69 and during the summer of 1971 to collect data on the Amis language. Fieldwork materials were collected on Nataoran, Kibit (or Kiwit) and Malan dialects, but the bulk of materials collected was from Nataoran-Amis. I worked with two main informants for over eight months. At that time, only a preliminary report and a 75-page text (Chen 1969) were produced.

The 1968 Aboriginal Languages Research Project of Academia Sinica marked the beginning of revived research interest and activities in Formosan linguistics since the death of Professor Tung T'ung-ho. The University of Hawaii has contributed to the recent development of Formosan linguistics in that, at least three faculty members, Dr. Fang-Kuei Li, Dr. Stanley Starosta, and Dr. Lawrence Reid have done fieldwork in Taiwan and several members of the Aboriginal Languages Research Project have been doctoral students at the

University. Dr. Paul Jen-kuei Li and Dr. Jeng Heng-hsiung have since their graduation returned to Taiwan to conduct more research on Formosan linguistics and train new students. A few of their students have studied Amis and at least three term papers or reports (Chu 1975a, 1975b; Wang 1975) and an M.A. thesis (Wang 1976) have been produced.

In 1972, when Dr. Stanley Starosta of the University of Hawaii spent some time in Taiwan
Bunun, Rukai, Saisiyat, Seedeq, and Tsou. His work resulted in an insightful paper on causative verbs in Formosan languages and refinement of the lexicase model (Starosta 1974). The Amis dialect that Starosta studied is also Nataoran-Amis, the dialect described in the present study. Dr. Lawrence Reid of the University of Hawaii was also in Taiwan for a second time in 1972, his primary interest being in Seedeq at that time. During his first visit in 1965, he collected word lists in six languages including Amis.

Other works that refer to the Amis language include Ferrell (1971, 1972, 1974, 1976) and Stanley (1974) dealing with morphology and syntax, and Dyen (1963, 1965a, 1965b, 1971), Dahl (1976), Ferrell (1969), Blust (1970, 1977), Foley (1976), Reid (1978a, 1978b, 1979), and Tsuchida (1976), dealing with historical reconstruction and subgrouping.

In the Bibliography I have entered all the references mentioned above plus some syntactically relevant works on Atayal (Egerod 1965, 1966a, 1966b; Yamada and Liao 1974), Tsou (Tung et al 1964; Starosta 1967, 1969; Li 1972; Stanley 1974, 1976; Tsuchida 1976), Saisiyat (Tsuchida 1964; Li 1975b, 1978b), Kanakanavu (Sung 1966, 1969), Rukai (Li 1973, 1975a), Puyuma (Sprenger 1971, 1972), Paiwan (Ferrell 1970, 1972, 1974), Bunun (Wu 1969; Jeng 1977), Thao (Li, Chen, and Tang 1958; Li 1975c, 1978b), Seedeq (Asai 1953), Pazeh (Li 1976, 1978b) and Kavalan (Li 1978a, 1978b). It is hoped that the present study can reflect the cumulation of knowledge on Formosan syntax to date on the one hand and the current stage of development of the lexicase model (see Chapter 2) on the other.

All significant papers and doctoral dissertations contributing to the development of the lexicase model are entered in the Bibliography. Included are works by Starosta (1971a, 1971b, 1971c, 1973, 1974, 1975a, 1975b, 1976a, 1976b, 1976c, 1976d, 1977, 1978, 1979a, 1979b, 1979c, 1982d, to appear b) and by Taylor (1971), Li (1973), Kullavanijaya (1974), Lee (1974), Clark (1978), Ikranagara (1980), DeGuzman (1978), Harmon (1977), Acson (1979), and Fagan (1979).

Also cited are selected references to works of theoretical interest which include Chomsky (1965, 1970), Cook (1971), Dixon (1979), Fillmore (1968, 1969, 1970, 1971, 1977), Gruber (1965, 1967), Gunther (1975), Halle (1973), Halliday (1967, 1970), Huddleston (1970), Hudson (1976), Jackendoff (1972), Jespersen (1964, 1975), Keenan and Comrie (1977), Cena (1977, 1978), Hopper and Thompson (1980), Kuroda (1965), Lakoff (1970), Leech (1969), Lyons (1968), Matthews (1974), McCawley (1968), O'Brien (1971), Platt (1971), Pleines (1976), and Stockwell et al (1973), even though these works may not directly deal with Formosan or Austronesian languages and linguistics.

For comparative purposes, I have also included some works on Philippine linguistics, in particular, syntactic studies that are relevant to the present study of verbal constructions and verbal classification. Included are: Bloomfield (1917), Capell (1964), Cena (1977, 1978), Constantino (1965, 1971), DeGuzman (1970, 1978), Dyen (1970), Harmon (1977), Hidalgo and Hidalgo (1970),

Ḳess (1967), McGinn (1970), McKaughan (1958, 1962, 1970, 1973), Mintz (1973), Mirikitani (1972), Pawley, Reid and Starosta (1978), Ramos (1974), Ramos and Cena (1979), Reid (1966, 1978a, 1978b, 1979), Schachter and Otanes (1972), Stevens (1969, 1973), Tchekhoff (1974), Walton (1979), and Zorc (1974a, 1974b, 1977).

Since there is inevitably an intricate overlap and cross-referencing between linguistic theory and language description on the one hand, and between Formosan languages and other Austronesian languages on the other, it seems almost impossible to group the bibliographical entries in any meaningful sections without running into problems of duplication and omission. I have therefore simply maintained a traditional bibliographical file which has its entries listed in the alphabetical order of the authors' last names.

1.4 Orthography and a Brief Phonological Description

1.4.1 Consonant and Vowel Inventory

The orthography adopted here is based on a phonemic analysis of Nataoran-Amis sounds which observes the biuniqueness criterion of autonomous phonology except in the case of (a) w, y, and q, and of (b) [ʔh], where maintaining this criterion would result in a loss of generalisations (see below). An inventory of consonants and semi-vowels is presented in Figure 1.10, and an inventory of vowel sounds is given in Figure 1.11. Corresponding to the orthographic symbols in Figures 1.10 and 1.11, phonetic values are given in IPA in brackets.

Nataoran-Amis consonants are: p, t, k, q, b, d, s, h, c, l, r, m, n, ng, w, and y. This system corresponds to that found in many Philippine languages such as Tagalog, except for the absence of g and the presence of c. Like many Philippine languages, Nataoran-Amis has a four-vowel system conventionally symbolised by i, e, a, and o, with the e representing the pepet [ɨ ∿ ə], a central, relatively high vowel found also in Indonesian languages.

Stress falls on the ultimate syllable of a content word (noun, verb, adjective, etc.). Function words are often unstressed as in ato *and*, saan *then*, toay *already*, and no *of*. When a suffix is added to the stem form, the stress automatically shifts to the last syllable of the affixed form. For example, tarakáw *tall* plus -ay becomes tarakawáy *the tall one* while botíng *fish* plus -an and the reduplicative prefix ba- becomes ba-boting-án *the fishing place*. Stress in Amis is predictable.

1.4.2 Syllable Structure and Canonical Form of Disyllables

Syllable structure of Nataoran-Amis is (C)V(C). Most Amis roots are disyllabic having the canonical form (C)V(C)(C)V(C). It must be noted that words with an initial vowel are extremely rare, and phonetically the initial vowel is always preceded by a glottal stop. In a disyllabic word, the second syllable does not begin with an initial vowel except when it is immediately following a (phonemic) vowel in the first syllable. In the latter case, depending on the environment, a glide or a glottal stop is always inserted between the adjacent vowels. Hence, phonetically, all syllables begin with a consonant. Examples of Amis disyllables are given in Figure 1.12.

In my data no words with the form V.VC, V.CVC, VC.V, VC.VC, VC.CVC, CVC.V, or CVC.VC occur.

	Labial	Dental-Palatal	Velar	Glottal
Stop vl	p[p,pʰ]	t[t,tʰ]	k[k,kʰ]	q[ʔ,ʔħ]
vd	b[v,β,b]	d[d,ð]		
Fricative		s[s,ʂ]		h[x,h,ħ,ʔħ]
Affricate		c[ts,tʂ,tsʰ]		
Nasal	m[m]	n[n]	ng[ŋ]	
Lateral		l[l,ɭ]		
Retroflex		r[r,ɻ]		
Semi-vowel	w[w]	y[j]		

Figure 1.10 Nataoran-Amis Consonants

	Front	Centre	Back
High	i[i,ɪ,e,ɛ]		o[u,ʊ,o,o]
Mid		e[ɨ,ə]	
Low		a[a]	

Figure 1.11 Nataoran-Amis Vowels

	V	CV	VC	CVC
V	ia *the*	ama *father*		
CV	toa *then*	tosa *two*	bois *star*	bolad *moon*
VC		ohni *they*		
CVC		mihca *year*		cilmin *sour*

Figure 1.12 Nataoran-Amis Disyllables

1.4.3 The Status of q, w, and y

Words with initial smooth-onset vowels are extremely rare in Amis; and this fact is reflected by the gaps in row 1 and row 3 of Figure 1.12. Words like the following: [ʔowaj] *rattan*, [ʔajam] *bird*, and [ʔaʔħtşid] *salty* I have analysed as having an initial phonemic q because even though they bear phonetic similarity with words like ama [ʔama] ∿ [ama] *father* and ohni [ʔoʔħni] ∿ [ʔoʔħni] *they*, the initial glottal in the former set of words does not disappear with prefixation. Examples are mi-qoay [miʔowaj] *to gather rattan* and qoa-qoay-an [ʔowaʔowajan] *place to gather rattan*. But in words like ama *father* and ohni *they* which are often pronounced with an initial glottal stop, the initial glottal stop disappears when prefixes or other formatives are added, as in ci ama [tsijama] *father* and k-ohni [koʔħni] *they*. It is possible that many of the words with initial glottal stops have historically had initial smooth-onset vowels but acquired the glottal stop by analogical pressure from the CV(C) syllable structures. The few words I have in my data with phonemic smooth-onset initial vowels: ia *the*, ama *father*, ina *mother*, ohni *they*, and ala *get* are phonologically exceptional, and possibly escaped the analogical process of initial consonant insertion because they are high-frequency words.

The semi-vowel w [w] occurs in all positions. Examples are wadis *tooth, fang*, wawa *child*, hawan *sword*, kawnay *basket*, lakaw *bamboo pole*, and radiw *song*. Words beginning with w are rare, and may reflect a secondary development. It is probable that the word wawa has been borrowed from Chinese, for example, and the initial w in wama *father*, wina *mother*, and waco *dog* is probably a later development stemming from the common noun marker for topic and nominal predicate: o.

The semi-vowel y [j] occurs in all but word-initial position. I cannot find any words in my Amis data that begin with y, except for a few Chinese loan words like yising *physician, doctor* and yong *soldier*. Other occurrences of y include the following examples: qayam *bird*, kayakay *bridge*, kaysing *bowl*, baboy *pig*, and kamay *hand*.

It must be noted that though we have included the phonemes w and y, their status is quite tenuous. Both w and y are very rare in initial position. The few cases there are are secondary developments or loan words. Although phonetically [w] and [y] show up a lot, in medial position their occurrence can almost always be predicted as glides automatically inserted by rules 1(a) and 1(b) given below. The total list of words that I can find that do not conform to these rules is quite small, while there are many words that conform to the generalisation. In my orthography I have chosen to leave out all predictable instances of intervocalic w and y, marking only those that are not predictable by environment as in siwa *nine*, sawad *abandon*, qayam *bird*, dayom [ðajom] *easy*, cawil [tsawiɬ] *earrings*, and cowiq [tsuweʔħ] *nightingale*.

The generalisation which motivates this orthographic decision is one of automatic glottal stop and glide insertion. Referring back to Figure 1.12, I would like to point out that in Amis the most popular forms for disyllables are CV.CV and CV.CVC, with CV.V and CV.VC converted phonetically to the same forms respectively, by an epenthetic process which inserts a glide or a glottal stop between the adjacent vowels. What is inserted depends on the phonological environment. The process can be expressed by the following rules:

1(a) [ ] → [w] / $\left\{\begin{matrix} o\_\_a \\ \\ a\_\_o \end{matrix}\right\}$

(b) [ ] → [j] / $\left\{\begin{matrix} a\_\_i \\ \\ i\_\_\left\{\begin{matrix} a \\ o \\ i \end{matrix}\right\} \end{matrix}\right\}$

(c) [ ] → [ʔ] / $\left\{\begin{matrix} a\_\_\left\{\begin{matrix} a \\ e \end{matrix}\right\} \\ \\ o\_\_\left\{\begin{matrix} i \\ o \end{matrix}\right\} \end{matrix}\right\}$

(Except for a__e, there are no other instances of e occurring in a vowel sequence in my Amis data, therefore rules 1(a), (b), and (c) do not address the following environments: e__a, i__e, e__i, o__e, e__o, and e__e).

Examples of automatic consonant insertation are: qoay [ʔowajˌ] *rattan*, soal [sowaɻ] *speech*, toa [towa] *then*, ma-olah [mawolah] *like*, raic [ɹajitsʰ] *rope*, ni-aroq [nijarɔʔħ] *place*, ci ama [tʂijama] *father*, ia [ija] *the*, kio [kijo] *eggplant*, ci ina [tʂijina] *mother*, saan [saʔan] *then*, taes [taʔəs] *hit*, bois [βuʔis] *star*, and poot [puʔutʰ] *knife*. This insertion takes place both within the word and across word boundaries. Two of the examples given above, namely ci ama and ci ina show the process operation across word boundaries while the other examples show operation within the word. In the case of ma-olah, the prefix ma- is added to the stem olah to form an intransitive verb. A similar epenthetic process is found also in many Philippine languages in intervocalic position. This is by no means an unusual process and can be phonetically explained in terms of formant transition and the manner of vowel onset.

If one adheres strictly to the structuralist dictum: "once a phoneme, always a phcneme", then even the predictable w, y, and q should be spelled out in all the examples cited above, which would be, in my opinion, losing a significant phonological generalisation. Hence, the decision is made to recognise the generalisations as expressed in rules 1(a), (b), and (c) by omitting all instances of predictable w, y, and q in the orthography even though this violates the biuniqueness criterion.

1.4.4 p, t, k, q, c, and Aspiration

The plosives p, t, k, and q are aspirated in word-final position. In initial and medial positions they are unaspirated. Examples showing p, t, and q in non-final positions include: panay [panaj] *sweet-rice*, tipos [tipʊs] *rice*, pito [pitʊ] *seven*, kilang [kilaŋ] *tree*, sarakod [sarakod] *heel*, qenem [ʔənəm]

six, toqas [to?as] *ancestor*, liqel [li?əl̩] *neck*, qakqak [?ak?akʰ] *crow*, and siqnaw [se?naw] *cold*. Examples showing p, t, k, and q in final position include: qicep [?itsəpʰ] *betel-nut*, qabet [?aβətʰ] *gunpowder*, bonak [βunakʰ] *sand*, kokoq [kokɔ?ħ] *foot*, moniq [munɛ?ħ] *soft*, and qomaq [?uma?ħ] *field*. The aspiration at the release of the glottal stop can be described as a pharyngeal fricative [ħ]. Since at the time of release the oral cavity may maintain the shape of the final vowel o [ɔ], a[a], or i [e ∿ ɛ], Ogawa and Asai (1935) interpreted the aspiration as voiceless vowels and represented them as [o̥], [ḁ], or [ɛ̥] instead of aspiration. In my analysis, this predictable voiceless paragogic vowel is considered an accompanying feature of the final q.

The affricate c is also aspirated in word-final position and unaspirated elsewhere. This patterning is parallel to that of the obstruents p, t, k, and q. Examples are: ciris [tşiris] *stream*, cacay [tsatsaj] *one*, and temangic [tɨmaŋitsʰ] *weep, cry*.

A final p, t, k, q or c loses its aspiration when a suffix beginning with a vowel is attached to the word. Examples are: satip [satipʰ] *western* and satip-an [satipan] *the west*; sepat [sɨpatʰ] *four* and sa-sepat-ay [sasɨpataj] *the four*; qacek [?atsəkʰ] *dirty* and qacek-ay [?atsəkaj] *the dirty one*; pasiq [paşe?ħ] *embarrassing* and saka-pasiq-an [sakapaşe?an] *the most embarrassing thing*; qipoc [?ipotsʰ] *short* and qipoc-ay [?ipotsaj] *the short one*. In short, the Amis stops and affricate are aspirated only in word-final position.

1.4.5 Palatalisation of c and s

When followed by the vowel i, s, and c are palatalised as in si-kawas [şikawas] *haunted*, ciris [tşiɹis] *stream*, basis [βaşis] *pork*, heci [hətşi] *meat*, and saciq [satşe?ħ] *whip*. Elsewhere s is [s] and c is [ts] in initial and medial positions and [tsʰ] in word-final position.

1.4.6 b and d

The voiced consonants b and d are realised as voiced stops in word-final position. Examples are: taheb [tahəb] *cover*, qanob [?anob] *covet*, qahcid [?a?ħtşid ∿ ?aħtşid] *salty*, bolad [βulad] *moon*, and sawad [sawad] *abandon*. It is to be noted here that words ending in b are extremely rare in Nataoran-Amis. Intervocalically and initially b and d are realised as fricatives. Examples are: tebos [təβos] *sugar cane*, qabel [?aβəl̩] *charcoal*, bois [βu?is] *star*, boting [βutiŋ] *fish*, qada [?aða] *enemy*, qodal [?oðal̩] *honey*, dipong [ðipoŋ] *nest, hive*, doka [ðuka] *wound*, and da-demak-an [ðaðɨmakan] *working place, office*. In consonant clusters, b and d are stops, as in malbawa [mal^{ə}bawa] *protruding* and baqdet [βa?dətʰ] *hot (of water)*. An epenthetic [ə] is usually inserted between the two consonants of a consonant cluster if the first element is the voiced stop b as in qabsaq [?ab^{ə}saʔħ] *bland, tasteless*. A parallel is found with r and l which are given below in section 1.4.8.

1.4.7 h

In syllable-initial position, before the vowel i, h is realised as [x] as in babahi [βaβaxe] *woman* and bihid [βixid] *cheek*. Elsewhere h is realised as [h]. Examples are: habay [haβaj] *millet*, hemay [həmaj] *cooked rice*, pohong [puhuŋ] *horn, antler*, waheng [wahəŋ] *molar tooth*, and kaqhong [ka?hoŋ] *shoulder blade*.

In syllable-final position, h is often realised as the pharyngeal [ħ]. Examples are: olah [oˌaħ] *like, love* and kapah [kapaħ] *good* in word-final position, and mihca [mɪħtsa] *year*, mohting [moħtiŋ] *black*, and lahngang [laħŋaŋ] *red* as the final consonant of an initial syllable, or, in other words, as the first member of a consonant cluster. In the latter case, [ħ] alternates freely with [?ħ] as in mihca [mɪħtsa] ∿ [mɪ?ħtsa] and mohting [moħtiŋ] ∿ [mo?ħtiŋ]. This alternation between [ħ] and [?ħ] makes h overlap phonemically with q, which has as its allophones [?] and [?ħ]. Looking at the environment of occurrence, we find that the [?ħ] that alternates with [ħ] is in complementary distribution with the [?ħ] allophone of q, which occurs only in word-final position. The alternative solution of grouping them together by complementary distribution and phonetic similarity would lead to the establishment of an additional phoneme, say, H, besides q and h. However, this analysis turns out to be unsatisfactory on three grounds. First, it loses the generalisation that q, like p, t, k, and c is aspirated in word-final position and unaspirated elsewhere. Also, the three phonemes H, q, and h will each show a defective distribution, as can be shown by Figure 1.13. Finally, the H, q, and h alternative itself entails a phonemic overlap with [ħ] showing up as allophone of both H and h. Thus we gain nothing by adopting this three-phoneme solution.

	Initial	Medial		Final
		V__V	V__C	
H			?ħ ∿ ħ	?ħ
q	?	?	?	
h	x,h	x,h		ħ

Figure 1.13 An Alternative Solution with Defective Distribution for H, q, and h

The two-phoneme solution adopted here shows the following distribution instead:

	Initial	Medial		Final
		V__V	V__C	
q	ʔ	ʔ	ʔ	ʔħ
h	x,h	x,h	ħ ∿ ʔħ	ħ

Figure 1.14 Distribution of q and h

This analysis allows us to capture the phonological generalisation about Amis voiceless stop consonants mentioned above.

1.4.8 Liquids and Nasals

The lateral l is retroflexed [ɭ] in syllable-final positions, i.e. in word-final position and as the first element of a consonant cluster. In these positions, l optionally takes on an epenthetic [ə] as in the following examples: potal [putaɭ] ∿ [putaɭ^{ə}] *front yard*, copel [tsopəɭ] ∿ [tsopəɭ^{ə}] *hot pepper*, cilmin [tʂiɭmin] ∿ [tʂiɭ^{ə}min] *sour*, and malcad [maɭtsad] ∿ [maɭ^{ə}tsad] *same*. Elsewhere l has the quality of a dark [l] as in many Philippine languages. Examples of words with initial l include: lial [lijaɭ] *sea*, lomaq [lumaʔħ] *house, home*, and lotongay [lutuŋaj] *infant*. Examples of words with l as the second element of a consonant cluster are: cinglaw [tʂiŋlaw] *excited* and qangliw [ʔaŋliw] *stale*. Examples of words with intervocalic l are: kilang [kilaŋ] *tree*, bolad [βulad] *moon*, ala [ala] *get*, and solol [soloɭ] *forgive*.

The retroflex r is a flap [ɹ] in all but syllable-final positions where it is a trilled [r]. Like l, syllable-final r may also take an epenthetic [ə]. Examples are: katar [katar] ∿ [katar^{ə}] *land, shore*, sapor [sapur] ∿ [sapur^{ə}] *rice sprout*, qoner [ʔonər] ∿ [ʔonər^{ə}] *snake*, qarkaq [ʔarkaʔħ] ∿ [ʔarəkaʔħ] *appalling*, borsen [βursɨn] ∿ [βurəsɨn] *numb*, and torcak [turtsakʰ] ∿ [tur^{ə}tsakʰ] *beak*. Examples showing r in initial and other medial positions include: rarapa [ɹaɹapa] *water buffalo*, ciris [tʂiɹis] *stream*, tireng [tiɹəŋ] *body*, and kapray [kapɹaj] *pimple*.

The nasals m, n, and ng occur in all positions. Examples are: mata *eye*, nanom *water*, and ngangan *name* initially; ama *father*, qenem *six*, and rangat *fence* intervocalically; tamdaw *person*, tenpeq *feather*, langdaw *blue, green*, toqman *dark*, siqnaw *cold*, and lahngang *red* in consonant clusters; and qayam *bird*, karin *wrist*, and kakang *crab* in word-final position.

1.4.9 Vowels

In my orthography, the four vowels of Nataoran-Amis are symbolised by i, o, a, and e (see Figure 1.11).

The front vowel i is realised as [e ∿ ɛ] before q and as [i ∿ ɪ] elsewhere. In unstressed syllables, [ɪ] is more common than [i]. Examples are: qadidiq [ʔadɪdeʔħ] ∿ [ʔadɪdɛʔħ] *small*, kotiq [koteʔħ] ∿ [kotɛʔħ] *serve you right!*, qicep [ʔitsəpʰ] ∿ [ʔɪtsəpʰ] *betel-nut*, lisin [liʂin] ∿ [lɪʂin] *festival*, mihca [mɪħtsa] *year*, and nani [nani] *cat*. (Note: my phonetic transcriptions represent particular token pronunciations as I recorded them. Sometimes more than one phonetic transcription for a given word appears in my notes, for example, qicep appears in my notes both as [ʔɪtsəpʰ] and [ʔitsəpʰ]. Except where the alternation is relevant, only one token is cited.)

The back vowel o is realised as [o ∿ ɔ] before q and as [ʊ ∿ o] elsewhere. In unstressed syllables, the most common form is [o]. Examples of words with the vowel o are: lotok [lotokʰ] ∿ [lʊtʊkʰ] *highland*, tebos [təβos] ∿ [təβʊs] *sugar cane*, taor [tawor^{ə}] ∿ [tawʊr^{ə}] *a kind of tree*, banoq [βanoʔh] ∿ [βanɔʔh] *feather, down*, and bokeloq [βʊkəloʔħ] ∿ [βokəlɔʔh] *stone*. The choice of the symbol o rather than u is based on the fact that [o] is the more common form and that it is in the middle of the range of phonetic values of this phoneme. The range of the back vowel is actually lower than that of the front vowel; to write them as if they are of the same height would be misleading. The choice of o also reflects a tradition in the description of Philippine languages such as Maranao (McKaughan 1958, 1963), Bikol (Mintz 1970:17-19), and Pangasinan (Benton 1971:12-14).

The symbol a stands for a low central vowel [a]. Examples of words with the vowel a are: qatay [ʔataj] *liver*, sema [səma] *tongue*, mata [mata] *eye*, boaq [βowaʔh] *kidney*, and kapah [kapah] *good*.

The symbol e stands for the pepet [ɨ ∿ ə] in Amis. Examples of words with the vowel e are: tebos [təβos] *sugarcane*, tesek [təsəkʰ] *real*, qicep [ʔitsəpʰ] *betel-nut*, dimel dimə̩l^{ə}] *neat*, and ma-becer [mabɨtsər^{ə}] *satiated*. The vowel e does not occur before q. In an unstressed CV-syllable preceded by an initial glottal stop q and followed by any consonant C, i.e., in a qeC sequence, e is often not pronounced. This results in an apparent qC sequence as in the following examples: qenem [ʔnɨm] *six* and qepah [ʔpaħ] *wine*.

1.4.10 Polysyllabic Words

In some of the disyllabic examples given above, such as qabsaq *bland, tasteless*, cilmin *sour*, malcad *same*, borsen *numb*, and torcak *beak*, which are in the CVCCVC form and have b, r, or l as the first element of the consonant cluster, an epenthetic [ə] is inserted between the two consonants, thus phonetically changing a disyllabic word into a trisyllabic one.

Many words of the CVCCVC form show two identical syllables as in the following examples: qakqak [ʔakʰʔakʰ] *crow*, ciwciw [tʂiwtʂiw] *chick*, bilbil [biə̩^{ə}biə̩^{ə}] *lips*, ngisngis [ŋisŋis] *beard*, tektek [təkʰtəkʰ] *pole, bar*, paypay [pajpaj] *kite*, and baybay [bajbaj] *mosquito net*. These words disregard the phonological rules we have given thus far regarding consonants in initial and medial positions. The first syllable simply copies the second syllable to the extent that aspirated stops are allowed in word-medial position as in

qakqak [ʔakʰʔakʰ] *crow* and that the initial consonant such as b in bilbil [biɻᵊbiɻᵊ] *lips* and baybay [bajbaj] *mosquito net* which should normally be a fricative [β] is assimilated to the initial stop of the second syllable.

Trisyllabic and polysyllabic words are formed by such morphological processes as reduplication and affixation. Examples are: lia-lial-an [lijalijalan] *seashore*, ka-siqnaw-an [kaşiʔnawan] *winter*, ka-koqkoq [kakoʔħkoʔħ] *frog*, tam-tamdaw [tamtamdaw] *everybody*, remia-remiad [ɹəmijaɹəmijad] *daily*, and na-taor-an [natawoɹan] *Nataoran*. Note that the medial q in the reduplicated stem of ka-koqkoq *frog* is aspirated.

Examples of other trisyllabic and polysyllabic words are: balocoq [βalotsoʔħ] *heart*, tangila [taŋila] *ear*, kacomoli [katsomoli] *snail*, polalohoq [pʊlalohoʔħ] *termite*, qalipawnay [ʔalipawnaj] *firefly*, and qadipapang [ʔaðipapaŋ] *butterfly*.

CHAPTER 2

FRAMEWORK OF DESCRIPTION

2.1 Lexicase — Pre- and Post-1979 Model

The theoretical framework adopted in this study is called the "lexicase" model. This approach to grammatical description grew out of Chomsky's model in *Aspects of the Theory of Syntax* (1965; henceforth *Aspects*) and Fillmore's case grammar of 1968, sometimes out of dissatisfaction with both. The lexicase model is a form of generative grammar which is narrowly restricted because it has a number of constraints designed to make the grammar falsifiable and hence verifiable.

The lexicase model has been developed by Stanley Starosta and some of his students and colleagues at the University of Hawaii and expounded in some fifty papers, articles, and dissertations. The lexicase model has been applied in previous doctoral dissertations to the descriptive analysis of Japanese by Harvey Taylor (1971), Rukai by Paul Li (1973), Thai by Pranee Kullavanijaya (1974), Kusaeian by Keedong Lee (1974), Vietnamese by Marybeth Clark (1975, formally published in 1978), Melayu Betawi by Kay Ikranagara (1975, formally published in 1980), Tagalog by Videa DeGuzman (1976, formally published in 1978), Kagayanen by Carol Harmon (1977), Classical and Modern Greek by Veneeta Acson (1979), and in a number of papers on languages including Sora, English, and Formosan by Stanley Starosta (1971b, 1971c, 1973, 1974, 1976d, 1977, 1978, 1979b, and to appear b). The lexicase model has been shown to be a viable alternative to the more powerful grammatical models that utilise transformational rules.

Prior to 1979, the lexicase model consisted of a set of phrase structure rules (PSR's), the lexicon, and a phonological component. In Figure 2.1 an outline of the lexicase model prior to 1979 is presented. For further details, see Starosta (1976b, 1978).

In the pre-1979 version of the lexicase model, as in many grammars written in Chomsky's *Aspects* model, context-free phrase structure rules were used to generate labelled trees and indicate hierarchical relations between sentence constituents. The basic function of PSR's was to make generalisations about the constituent structure and word order of sentences in the language. As the lexicase model evolved, it was suggested by Starosta (1976:2) that the role played by PSR's in making statements about construction composition and order could be taken over by contextual features and redundancy rules. In 1979, Starosta declares the end of PSR's in the following statement:

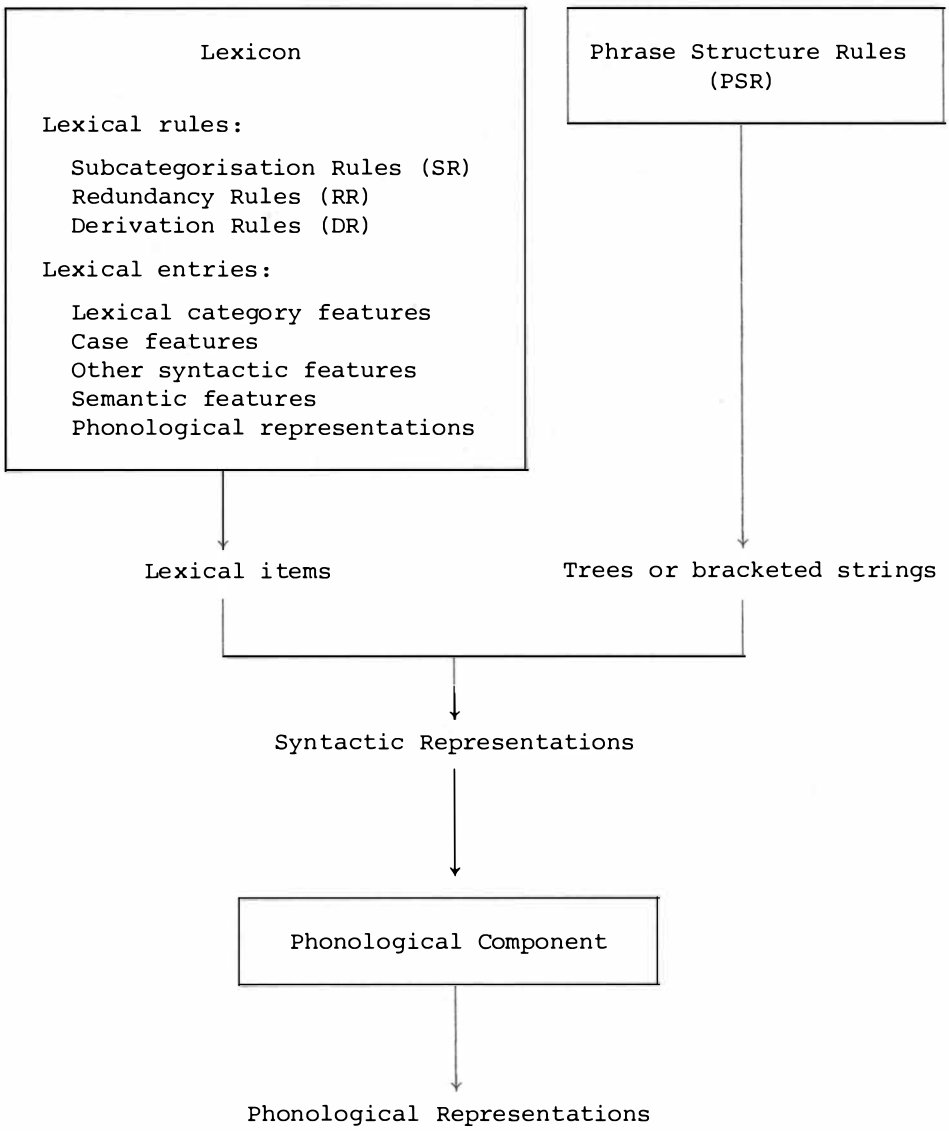


Figure 2.1 Pre-1979 Lexicase Model
(adapted from DeGuzman, 1976:9)

> Since we have two ways of doing the same thing, RR's and PSR's, we can decrease the class of possible grammar compatible with our theory by outlawing one of the two mechanisms; and since Redundancy Rules and contextual features are necessary elsewhere in the grammar, it is the Phrase Structure Rules that have to go (Starosta 1979a:70).

How redundancy rules and contextual features can actually replace PSR's will be shown later in section 2.2.2.2.

With the elimination of PSR's, post-1979 lexicase model is composed of the components shown in Figure 2.2. It is understood that lexical entries are still characterised by such lexical category features, case features, etc. as indicated in Figure 2.1. In fact, the transition from pre- to post-1979 model leaves practically all the basic assumptions and claims of the lexicase grammar intact.

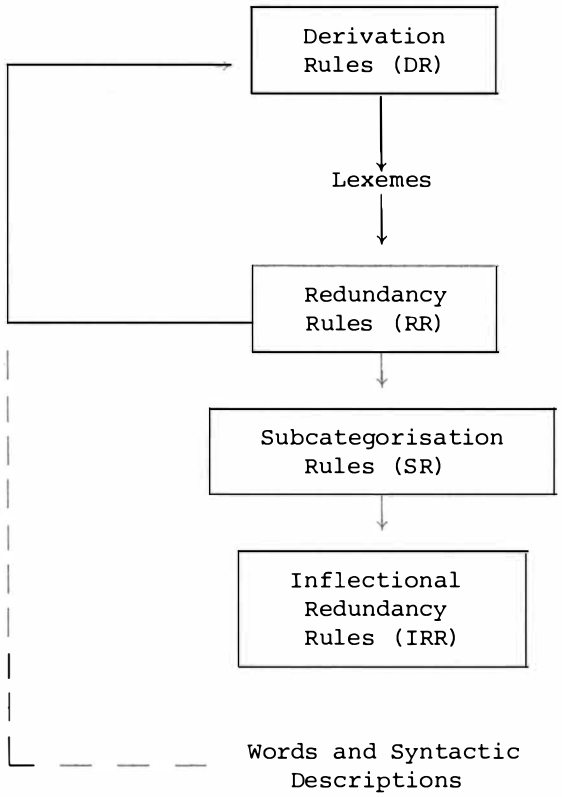


Figure 2.2 Components of a Lexicase Grammar (Post-1979 model adapted from Starosta 1976b:154 and 1979b:5).

We shall now turn to a description of the lexicase model, including feature specification and rule formalism. As one may have already suspected, and justifiably so, by looking at Figure 2.2 that a lexicase grammar amounts to a thorough description of the lexicon, we must point out that, in a lexicase model, syntax is conceived as "the way in which words can be combined into sentences, and the combinatorial potentials of words as marked in their lexical entries" (Starosta 1977b:150). Words are pivotal in the lexicase framework and constitute the subject of study for both morphology and syntax. As Starosta puts it:

> Morphology is the study of the internal structure of words, and syntax is an account of the distribution of words in sentences. Grammar is the set of all general statements that can be made about the internal and external distribution of words in sentences, and the lexicon is a list of lexemes, words which have been stripped of all aspects of their sound-meaning-form correspondences which can be predicted by general rules. (Starosta 1978:3)

A lexicase grammar thus contains rule statements of all the possible generalisations about the form, content, and syntactic distribution of classes of words, with lexical matrices streamlined accordingly. What we get is a list of lexemes which are residual, quintessential forms marked only for non-predictable, irregular, and idiosyncratic features, and a set of lexical rules stating all the significant generalisations about the language. There are no rules outside of the lexicon, except for the Phonetic Interpretation Rules (PIR) and Semantic Interpretation Rules (SIR) which are excluded from lexicase grammar proper (see Figure 2.3 below).

Pre-1979 lexicase grammar had a phonological component. This was probably the least developed component within the model. What with phonological representation provided for each lexical entry and with morphophonemic rules in the lexicon to handle phonological changes or alternations within word boundaries, the role of the phonological component in a lexicase model was always minimal. As DeGuzman puts it, the phonological component is limited only to operations that are "across word boundaries but within the bounds of the sentence" (DeGuzman 1977:7). Such operations have not been described at any length in the literature, but to judge by Paul Li's description of Rukai phonology (Li 1973:12-32), they seem to stay within the Generative Phonology framework. Li has adapted distinctive features and morpheme structure rules for his own description.

Since phonology is beyond the scope of the present study, I have designed an Amis orthography primarily on the basis of autonomous, phonemic principles (see section 1.4) and have treated my orthographic representations as the phonological representations associated with lexical entries.

A lexicase model does not include a separate semantic component. Semantic interpretation is placed outside the boundary of the model, although semantic information has in fact been provided by the content of lexical items and the relations between these lexical items within a given sentence. Beyond this kind of "intrinsic" or intensional semantic information, the model does not handle semantic interpretation based on extra-linguistic information such as "perspective" (Fillmore 1977:59, Starosta 1978:25-29), "context of situation" (Starosta 1976b:3, 29), or "real and imagined worlds" (DeGuzman 1976:8). The only context of significance to the model is the linguistic context within the sentence.

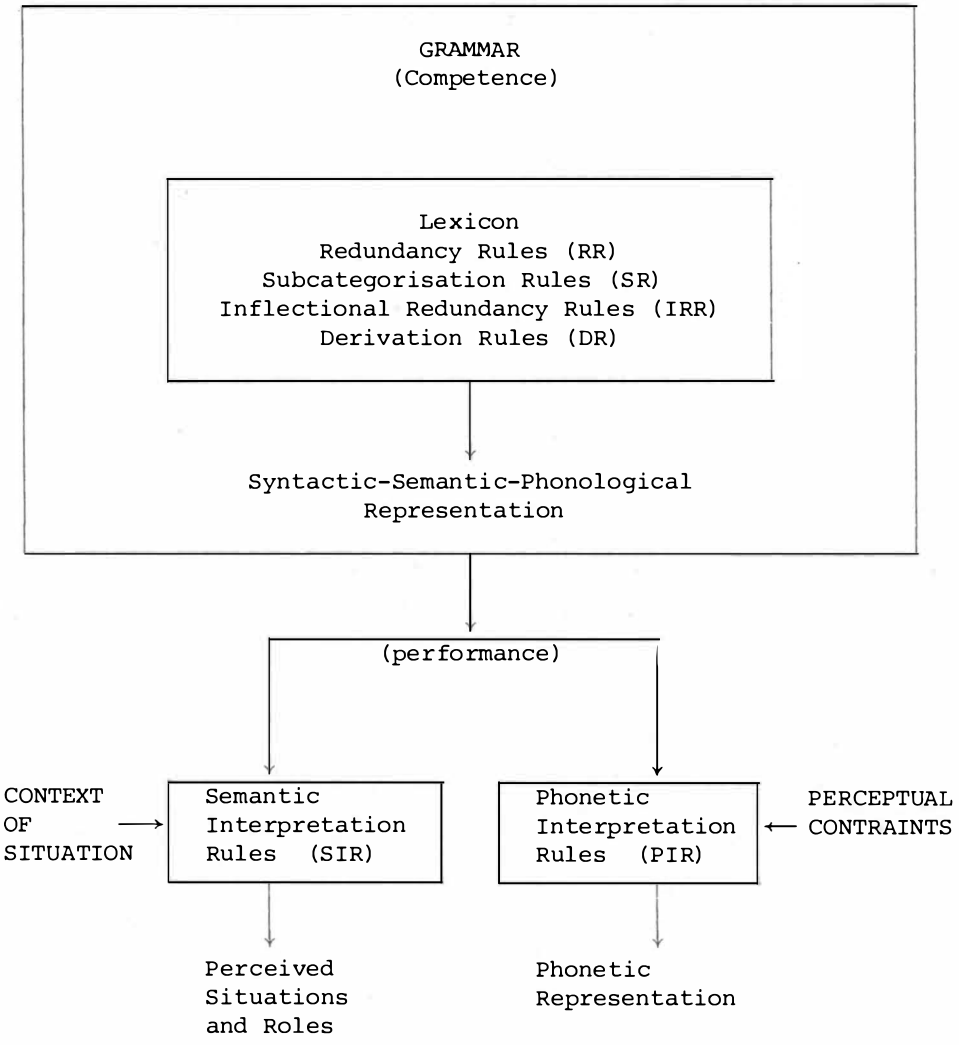


Figure 2.3 A lexicase Flow Chart
(Adapted from Starosta 1978:3)

2.2 Lexical Features and Lexical Rules

The lexicon in a lexicase grammar consists of three basic types of lexical rules and a list of lexical entries. The three types of lexical rules are: subcategorization rules (SR), redundancy rules (RR), and derivation rules (DR).

2.2.1 Lexical Features

Each lexical entry has a matrix of features, specifically those that are not assignable by subcategorisation rules nor predictable by redundancy rules. Each entry also has a phonological representation.

Lexical features include:

a. lexical category features such as [+N] for Noun, [+V] for Verb, [+Det] for Determiner;

b. case relation (CR) features such as [+PAT] for Patient and [+AGT] for Agent;

c. case form (CF) features such as [+Nom] for Nominative, and localistic case form features such as [+drcn] for "direction", and [+sorc] for "source";

d. contextual features, including case frame features, particular to verbs, such as [+[+PAT]] meaning obligatory co-occurrence with the Patient case relation, or [-[+Nom,-PAT]] meaning that the verb's co-occurring Nominative case form can only be in the Patient case relation;

e. semantic features associated with syntactic or morphological consequences, such as [+top] for "topic" and [+def] for "definite";

f. morphological features such as those associated with voice and tense/aspect inflections on the verb, e.g. [+inch] for inchoative and [+pot] for potential; and

g. other idiosyncratic features including idiomatic usage, as well as dictionary meaning assigned to the item by convention, e.g. [*small*] for adiding and [*once-upon-a-time*] for ia-hanto.

Any of these lexical features can be used for the subcategorisation of lexical entries. Lexical items become fully specified only after the application of lexical rules.

2.2.2 Lexical Rules

The three types of lexical rules that relate lexemes to fully specified words are the Subcategorisation, Redundancy, and Derivation Rules. Subcategorisation Rules (SR) characterise the possible lexical categories or classes within the language. Redundancy Rules (RR) state the predicatable features not marked on the lexemes. Both SR's and RR's are obligatory. Derivation Rules (DR) are word-formation rules.

2.2.2.1 Subcategorisation Rules

Subcategorisation rules (SR) identify features that subcategorise lexical categories. Both primary and contextual features are placed in brackets ([ ]) and marked by a plus (+) or a minus (-) to respectively indicate the presence or absence of certain contextual feature for a particular category, say the Verb. For example, [-[+LOC]] means the absence of [+LOC] in that environment.

The symbol "plus or minus" (±) before a feature in the output of a SR means that the lexical category characterised by the feature to the left of the arrow can be subcategorised by the feature to the right of the arrow on the basis of its presence or absence. For example:

(2.1) SR-i [+Det] → [±dem]

states that the lexical category of determiners (Det) is subcategorised into demonstratives, marked by [+dem], and non-demonstratives, [-dem]. The input feature can also be negatively marked as in

(2.2) SR-ii [-dem] → [±pers]

which states that non-demonstratives can be either personal [+pers] or non-personal [-pers] articles.

Even before the elimination of phrase structure rules from the system, co-occurrence restrictions on lexical items were marked on the lexical items in the form of contextual features. Since head categories are subcategorised in terms of co-occurrence with their sisterheads, contextual features may perform the dual role of subcategorisation and the stating of co-occurrence restrictions between constituents. Contextual features are therefore utilised in SR's as well as RR's.

It is to be noted that, the arrow (→) in SR's does not indicate an equivalent "rewrite" relation between the input and output as it does with a conventional PSR. Instead, the arrow is to be read: "is subcategorised as".

SR's are divided into two subtypes: lexical SR's such as SR-i and SR-ii above, and those that describe the inflectional properties of various classes of words. The second subtype of SR's is called the Inflectional Subcategorisation Rules (ISR). By these rules words are subcategorised according to the morphological and phonological consequences (which are subsequently specified by IRR's) associated with certain inflectional features. Examples are:

(2.3) SR-iii [+N] → [±plur] plur = "plural"

(2.4) SR-iv [+V] → [±past] past = "past tense"

(2.5) SR-v [-past] → [±3sing] 3sing = "third person singular"

for English taken from Starosta (1976b:220). Such rules define subclasses of words that can be represented by the branching diagram shown in Figure 2.4.

An ISR differs from a lexical SR in that

> instead of simply stating a set of well-formedness conditions on lexical items, it actually operates on an abbreviated lexical entry in the lexicon, reconstituting the feature matrices of the separate words from which the entry was originally abstracted. (Ibid.:224).

Unlike the lexical SR's, ISR's do perform an operation which takes each input lexical entry and replaces it with two entries which differ only in inflectional feature specification. One could say, then, that ISR's replace lexical entries by paradigms. Consequently, ISR's actually generate items not overtly listed in the lexicon as the examples in Figure 2.4 will show. The morphological and phonological consequences of the inflectional features assigned by ISR's are stated as Inflectional Redundancy Rules (IRR). IRR's must be ordered after the SR's because the input features to the left of the arrow in an IRR are introduced by ISR's.

In recent lexicase analysis (Acson 1979, Starosta 1982d and to appear b) lexical SR's and ISR's have been grouped together since no formal reason has been found to separate them.

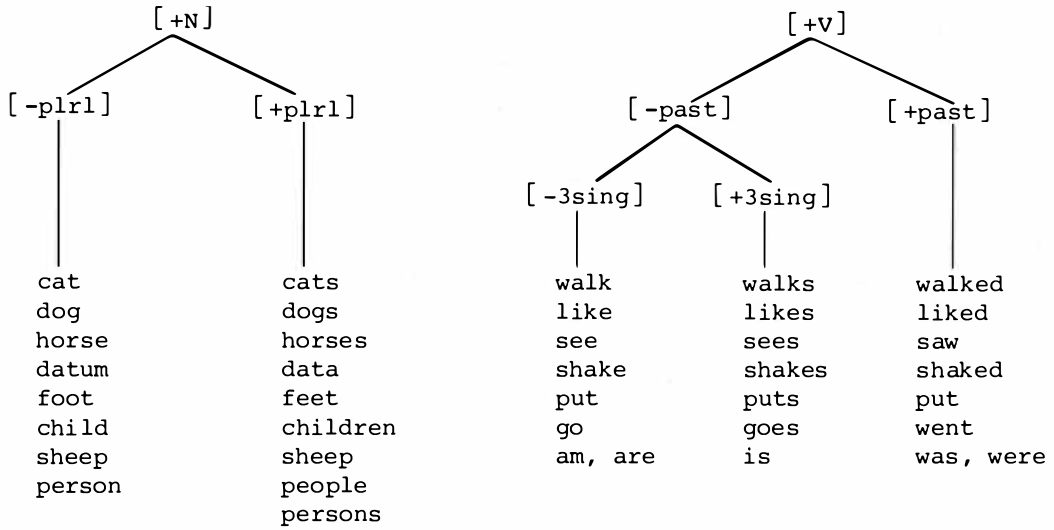


Figure 2.4 Examples of Subcategorisation of words by ISR's (Ibid.:221)

2.2.2.2 Redundancy Rules

Redundancy Rules (RR) resemble Subcategorisation Rules (SR) in form, except that SR's have ± on the right side of the arrow while RR's allow pluses and/or minuses, but never ±. Moreover, in RR's the arrow symbol (→) is to be interpreted differently. It implies the adding on of unmarked feature(s) predictable on the basis of the feature or combination of features given as input to the RR. By the application of redundancy rules, lexical items will receive full feature specification, which is needed for subsequent semantic interpretation. An implied feature is now made explicit by a RR and given as its output, with either a "plus" (+) or a "minus" (-) before it. An example is taken from DeGuzman (1976:5):

(2.6) RR-i $\{^{+V}_{+strict}\} \rightarrow [+[+LOC]]$

This means that all verbs marked [+strict] are also marked with the feature on the right hand side of the rule. In this case, the added feature states that a [+LOC] actant must overtly co-occur with the verb.

Greek letters α, β, etc. may be used in conjunction with + and - to collapse pairs of rules involving the same features. A redundancy rule of the form

(2.7) RR-ii $[\alpha F_i] \rightarrow [\alpha F_j]$

states that when the input feature F_i, is marked by a plus, so is the output feature, F_j, and that when the input feature is marked by a minus, so is the output feature. The two subrules of 2.7 can actually be stated as follows:

(2.7a) $[+F_i] \rightarrow [+F_j]$

(2.7b) $[-F_i] \rightarrow [-F_j]$

An example of RR-ii is taken from Paul Li's description of Rukai structure (Li 1973:85):

(2.8) $\begin{Bmatrix} \text{-dem} \\ \alpha\text{pers} \end{Bmatrix} \rightarrow [\alpha\text{def}]$

What this rule says is that personal [+pers] articles are always definite [+def] while non-personal [-pers] articles are always indefinite [-def].

Likewise, rule 2.9 in the following is a notational variant of the pair of rules of the form 2.9a and 2.9b.

(2.9) RR-iii $[\alpha F_i] \rightarrow [\alpha F_j]$

(2.9a) $[+F_i] \rightarrow [-F_j]$

(2.9b) $[-F_i] \rightarrow [+F_j]$

An example of RR-iii is the following one in Amis involving contextual feature:

(2.10) $\begin{Bmatrix} \text{+N} \\ \alpha\text{prsn} \end{Bmatrix} \rightarrow [-[-\alpha\text{prsn}] \_\_]$ prsn = "person"

What this rule says is that Amis personal nouns do not occur after non-personal articles and that non-personal nouns do not occur after personal articles.

Whereas the role of lexical SR's in a grammar is to describe the structure of the lexicon by partitioning lexical categories into binary subsets, RR's serve to simplify the lexicon by stating generalisations about implicational relations among lexical features. Lexical SR's do not actually operate on anything already in the lexicon, though the inflectional ones do. Lexical SR's, as the term implies, subcategorise lexical sets by formalising polar choices between the plus and minus values of one or more features. RR's only add predictable unmarked features and do not change any features that are already marked in the matrix to which they are applying. While SR's are unordered with respect to each other, RR's are ordered according to increasing degree of generality, the last and most general RR being the Ω-rule (Omega-rule).

(2.11) Omega-rule: $[\ ] \rightarrow$ |-[+N] |
|-[+V] |
|-[+P] |
|-[+Det]|
|-[+PAT]|
|-[+AGT]|
|-[+COR]|
|-[+REF]|
|-[+LOC]|
|-[+PLC]|
|-[+INS]|

What the Omega-rule states is simply that nothing co-occurs with anything. This last and most general of the RR's reflects one-word utterances in which the given word does not co-occur with any sister category. The Omega-rule

represents the most primitive phrase structure and the most general form of co-occurrence restriction, i.e., non-co-occurrence. All other rules of the grammar that refer to optional environment can be stated as exceptions to this rule.

It is necessary to point out that in earlier versions of the lexicase theory, phrase structure rules, PSR's, had been used as alternatives to a special class of RR's that refer to contextual features. With the elimination of PSR's from the system, statements on word order and co-occurrence restriction are made only by these RR's. What distinguishes RR's of this class is that their input matrices contain only one feature which refers to a major lexical category, such as [+N] or [+V], whereas the output of the rules refers only to contextual features stating co-occurrence conditions in terms of sisterheads. Trees of any form with possible combinations of categories in all conceivable sequences and hierarchical arrangements are potentially allowed. However, contextual features in RR's act as well-formedness conditions on these trees, marking as ill-formed any configuration of lexical items in a tree if any contextual feature is violated. Starosta is obviously quite pleased with the outcome of reassigning the role formerly played by PSR's to RR's with contextual features as he writes,

> Finally, this is probably a good way to define a grammar; syntax is just a general statement of the regularities that can be found in the co-occurrence restrictions of individual lexical items. (Starosta 1976b:184)

RR's are also divided into two subtypes: lexical RR's such as rules 2.8, 2.10, and 2.11 (the Omega-rule) given above, and those that add to the output of ISR's those features such as [+plrl] "plural". The latter type are called the Inflectional Redundancy Rules (IRR). Each IRR, in turn, may be further divided into two parts: the first part stating the syntactic consequences of the presence of a given inflectional feature in terms of co-occurrence restrictions, and the second part stating the morphophonemic consequences of the given inflectional subrules, which are quite different in form. Consider the following example taken from Starosta (1976d:4):

$$(2.12) \qquad \begin{matrix} [+plrl] \rightarrow [-[-plrl]\ \_\_\ ] \quad plrl = \text{"plural"} \\ ] \rightarrow z] \quad /[+plrl] \end{matrix}$$

The first part of rule 2.12 introduces a contextual feature which states the syntactic consequence of the inflectional feature [+plrl]. What it says is that a plural constituent head, which is a noun, cannot follow a non-plural attribute in the same constituent. In other words, this rule makes a statement on number agreement. The second part of rule 2.12 states that a suffix /z/ is to be added to all lexical items positively marked for the feature plurality. Rules as exemplified by the second part of 2.12 can also be referred to as Morphological Rules (MR) (Starosta 1976b:152) and as Morphophonemic Rules (DeGuzman 1977:7). Such rules state the phonological consequences of the presence of particular inflectional features.

Lexical RR's apply before lexical SR's and IRR's apply after ISR's. Lexemes which are irregularities or exceptions to the inflectional rules are marked for the particular inflectional feature concerned prior to the application of SR's so that subsequent applications of ISR's introducing a ± choice of that feature will be blocked.

2.2.2.3 Derivation Rules

A lexicase grammar includes Derivation Rules (DR) "in fulfillment of part of its obligation to account for the fact that speakers of a language recognise relationships between words that by most objective criteria have to be considered distinct" (Starosta ibid.:186). Formally, DR's constitute a very different type of lexical rule. Lexicase DR's, written with the use of a fletched arrow (>→), relate one lexical entry to another lexical entry or a lexical category to another lexical category. By means of DR's, new lexical entries can be created by analogy with existing ones. Input to a DR is in the form of a feature matrix which specifies the already existing entry or category. Output of a DR is also given in the form of a feature matrix. Features can be added, omitted, or copied by DR's. The convention is that all features mentioned in the output matrix must appear in the derived lexical representations even though they may or may not have been in the representations of the original lexeme; all features in the input matrix that fail to appear in the output matrix are necessarily omitted; and features of the items in the input class not specifically mentioned in the input matrix or in the output matrix are carried over into the derived items. As an example, consider the following rules given by Starosta (1976b:198) for English gerundive nominalisations:

(2.13) (a)
$$\begin{bmatrix} +V \\ \\ \supset \begin{pmatrix} +NM \\ \alpha F_i \end{pmatrix} \end{bmatrix} \quad >\!\!\rightarrow \quad \begin{bmatrix} +N \\ +mass \\ -[+rtcl]\_\_ \\ \supset \begin{pmatrix} +Det \\ \alpha F_i \end{pmatrix} \end{bmatrix} \quad rtcl = \text{"article"}$$

(b)
$$] \quad >\!\!\rightarrow \quad in]$$

Rule 2.13 states that, corresponding to every verb in the lexicon is a mass noun with exactly the same lexical features, except that (i) the derived noun lacks the feature [+V] and the selectional restriction on a grammatical subject [+NM], and (ii) it adds the features [+N] and [+mass]; prohibits the occurrence after an article; and implies the occurrence of a determiner which must satisfy the same selectional restrictions as the grammatical subject of the corresponding verb. The symbol "$\supset$" is read as "implies" and is used to express selectional restrictions without treating their violations as resulting in ungrammaticality.

Ikranagara (1975) makes a distinction between the completely productive and the non-completely productive derivation rules. The former she calls the productive derivation rules (PDR) and the latter, Word Formation Analogies (WFA). Similarly, Aronoff (1976:35-45) has also recognised the distinction between productive and nonproductive Word Formation Rules (WFR's). PDR's are 100% productive, with the meanings of the derived items completely predictable on the basis of the old items. Ikranagara gives the following example of a PDR from her description of Betawi (Ikranagara 1975:22):

(2.14)
$$\begin{bmatrix} +V \\ +stative \\ +\left(\begin{bmatrix} +NM \\ +THM \end{bmatrix}\right) \end{bmatrix} >\!\!\rightarrow \quad \begin{bmatrix} +V \\ +derv \\ +stative \\ +comparative \\ +\left(\begin{bmatrix} +NM \\ +THM \end{bmatrix}\right) \end{bmatrix}$$

This rule states that, given a stative intransitive verb in Betawi, there is always a corresponding derived comparative stative intransitive verb, sharing all the same features but with the additional meaning of "more" and the specification that the comparative item is derived.

WFA's are not completely productive though some may have the potential of becoming so. WFA's state the analogical patterns on the basis of which one set of items is related to another. An example of WFA in Betawi is given below (ibid.:123):

(2.15) $[+V] \Rightarrow \begin{pmatrix} +N \\ +derv \\ +person \end{pmatrix}$

WFA's are written with a double barred fletched arrow, indicating that they are directional, although not completely productive. Rule 2.15 states that for some verbs in Betawi there are corresponding person nouns, each of which shares the same features as the given verb but refers to a person who habitually performs an action or is characterised by a state referred to by the verb.

In this study, the distinction between PDR's and WFA's is kept.

Associated with DR's are specifications of phonological modifications, if any, that distinguish the output from the input. Square brackets are used to represent the boundaries of a word. In the case of English gerundive nominalisations, the right bracket (]) in part (b) of rule 2.13 indicates the right boundary of a word where a suffix is to be added. Similarly, a left bracket ([) in the input represents the left boundary at which a prefix is to be added, as in the following example:

(2.16) [→ [mi

Rule 2.16 is the phonological part of a DR which describes a pattern in Amis by which a prefix /mi/ can be added to a word stem, as in the formation of intransitive verbs from nouns that function as their cognate objects. The following example shows how an infix /em/ can be inserted after the initial consonant C, including the zero-initial:

(2.17) $[C_0^1 \rightarrow [C_0^1 em$

Reduplication of an initial CV sequence can be expressed as:

(2.18) $[C_1V_1 \rightarrow [C_1V_1C_1V_1$

It is to be noted that whether or not an overt phonological change marks the change in lexeme identity is not crucial to the formulation of DR's. In other words, "zero derivation" is also expressed by DR's. The primary criteria for the identification of derived forms are syntactic and semantic rather than phonological (cf. Starosta 1976b:185-6).

Derivation rules are unordered. They apply before subcategorisation rules. Input to DR's comes from lexemes with their predictable features specified by the application of lexical redundancy rules, in accordance with the traditional assumption that derivations apply to stems rather than inflected forms. The broken line leading from fully specified words to DR's in Figure 2.2 indicates the existence of some possible exceptions to this generalisation.

In summary, Figure 2.2 and Figure 2.3 together give a representation of the most recent conception of the lexicase model. The lexical rules described above, namely, Lexical Redundancy Rules (LRR or simply RR), Subcategorisation

Rules (SR), Inflectional Redundancy Rules (IRR), and Derivation Rules (DR) constitute the "components" of the lexicon and hence lexicase grammar proper.

2.3 Constraints on the Model

It was mentioned earlier that the transition from the pre- to post-1979 lexicase model leaves the basic assumptions and claims of the theory intact. The only significant change in the model is the abandonment of phrase structure rules, which in effect reduces the grammar to a description of the regularities in the lexicon.

The lexicase model of grammatical description was conceived in an effort to counteract what Starosta perceived as the burgeoning power of transformations and the decline of empirical verifiability of transformational generative grammars. Time and again Starosta reiterated the original Chomskyan requirement that linguistic descriptions be generative, that is, formal and explicit, in order to restore empirical verifiability, and a number of constraints on lexicase grammars were proposed in order to eliminate the excessive power of transformations (see Starosta 1979c).

Among the constraints that have been imposed on lexicase grammars are the following (cf. Starosta 1979a:60-2):

1. There is no distinction between deep and surface structures, and there are no grammatical rules that map one sequence or hierarchy onto another; that is, there are no rules that adjoin, delete, permute, or copy parts of one structure to produce another structure.

2. A grammar may contain no rule features. That is, it may contain no lexical feature of the form $[+R_i]$ or $[-R_i]$ where "R_i" is the number or "address" or a particular rule in the grammar and where $[+R_i]$ indicates that the item on which it is marked must undergo rule R_i in every derivation, while $[-R_i]$ indicates that its host item may never undergo rule R_i.

3. Grammars operate on words, not morphemes. Syntactic structures are hierarchically structured sequences of words, not strings or disembodied morphemes. The lexicon consists of words and of stems (words minus inflectional affixes), not morphemes. There are no rules outside of the lexicon.

4. Features are marked only on lexical items, not at higher nodes in a syntactical representation.

5. Every syntactic constituent must have at least one lexical head which by the $\overline{X}$ convention (Chomsky 1970) determines the label to be given to the constituent of which it is the head.

6. (The Sisterhead Hypothesis, cf. Starosta 1975:74-5)

   a. Grammatical relations obtain only between the syntactic head of a construction and the lexical heads of its sister constituents.

   b. All syntactic subcategorisation of words is indicated in the lexicon by means of contextual features on those lexical items which occur as heads of their constructions.

c. Contextual features refer only to inherent features of "sisterheads", i.e., lexical heads of sister constituents.

The term "sister constituents" can be defined as any two (or more) constituents which are directly dominated by the same node. At this point, the terms "head", "attribute", "endocentric construction", and "exocentric construction" should be introduced. The concepts "head" and "attribute" are very important in a lexicase grammar. The head of a construction is the obligatory representative of that construction. Centricity of a construction is determined by the number of heads in the construction — if a construction has only one head, it is endocentric, and if a construction has more than one obligatory member, it is exocentric. In a conventional phrase structure rule, the head is the item that appears without parentheses whereas the attribute is an item in parentheses on the right side of the arrow, as shown in the following examples:

(2.19) S → (NP) V (NP)

(2.20) NP → (Det) (Adj) N

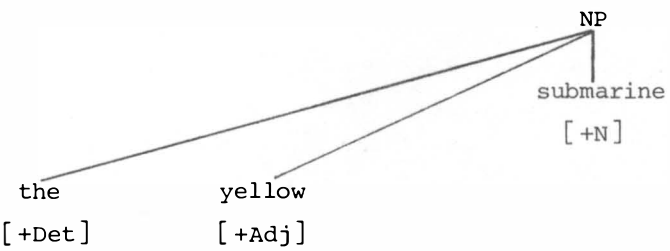
(2.21) PP → P $\{^{NP}_{S}\}$

Examples 2.19 and 2.20 are endocentric whereas example 2.21 is exocentric. In example 2.19, V is the head of S. In example 2.20, N is the head of NP. The head of an endocentric construction must be a lexical item rather than a construction. In an exocentric construction, at least one head must be a lexical item. In example 2.21, it is P. As for the attribute, it may be either a lexical item, e.g. Det and Adj in 2.20, or a construction itself, e.g. NP in 2.19.

With an understanding of these basic concepts, one can now see that the Sisterhead Hypothesis is in essence a claim about the nature of the dependency hierarchy among the constituents of a sentence. Since heads are subcategorised with respect to the syntactic attributes that are dependent on them, the Sisterhead Hypothesis also serves as a governing principle for delimiting the domain of lexical subcategorisation and establishing the direction of modification. All possible sequences of constituents are adequately accounted for; so is such grammatical information as centricity and head-attribute relations.

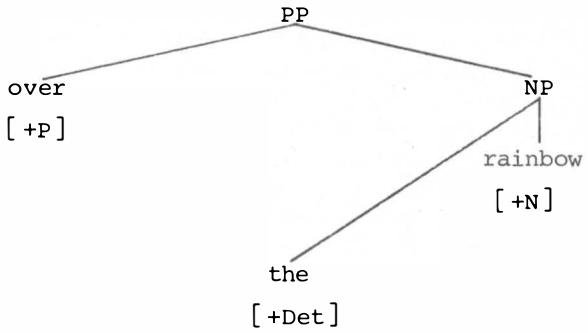
By referring to the RR's, it is also possible to construct a tree representation for any given sentence. The lexicase convention for constructing trees requires that, for endocentric constructions, the lexical head by written on a vertical line directly under the node which dominates the construction as a whole, and that attributes be written on slanted lines to the right or left, but one step below the level of the head, e.g.:

(2.22)



For exocentric constructions, the co-heads are both written on slanted lines, equi-distant to the right and left of the node dominating the construction as a whole and one step down, e.g.:

(2.23)



It is required that the end of every branch in a lexicase dependency tree must be a word, no more and no less. The construction types can be identified by the category features on their respective lexical heads, such as [+Det], [+N], and [+P], instead of as nodes in the tree representation. Although node labels such as S, PP, and NP are thereby optional and formally redundant, since they are predictable from the category features, they may be retained for readability.

By referring to the Sisterhead Hypothesis, lexical redundancy rules utilising contextual features of words provide an alternative mechanism to account for constituency and possible sequences of constituents within sentences in terms of hierarchical domains of subcategorisation. The role played by phrase structure rules in making statements about constituent structures can thus be taken over by contextual features and redundancy rules.

Together the constraints in this section narrowly restrict the class of possible grammars, ruling out a large number of "generative" grammars written since 1957. There are other constraints on lexicase grammars, such as the "one per Sent" constraint or the "1/Sent principle" which will be separately dealt with in section 2.4.5.

Constraints 3-6 above are the ones most directly related to the abandonment of PSR's. Starosta (1979a:59) announced the end of PSR's as "one of the unexpected consequences" of imposing these constraints on lexicase grammars. The replacement of Phrase Structure Rules by lexical redundancy rules can be illustrated below by showing how a representative set of PSR's (2.24-2.27) can be stated as RR's (2.28-2.31) instead (ibid.:20). We shall begin with four PSR's:

(2.24) S → (NP) (Adv) V (Comp)

(2.25) Comp → P^S

(2.26) PP → P^NP

(2.27) NP → (Det) (Adv) (Adj) N (PP)

These PSR's can be replaced by the following set of RR's:

(2.28) [+V] → a. +([+N]) ___ ; b. +([+Adv]) ___ ; c. + ___ ([+V]) ; d. + ___ ([+P]) ; e. - ___ (+V / -P) ; f. -[+N][+N] ___ ; g. -[+Adv][+Adv] ___ ; h. - ___ [+V][+V] ; i. - ___ [+P][+P] ; j. - [+Adv][+N] ___

(2.29) [+P] → (([+N]) / + ___ ([+V]))

(2.30) [+N] → +([+Det]) ___ ; +([+Adj]) ___ ; +([+Adv]) ___ ; -[+Adj][+Adj] ___ ; -[+Det][+Det] ___ ; -[+Adv][+Adv] ___ ; -[+Adj][+Det] ___ ; -[+Adv][+Det] ___ ; -[+Adj][+Adv] ___ ; + ___ ([+P]) ; + ___ ([+N]) ; +N ; - ___ -P ; - ___ [+P][+P] ; - ___ [+N][+N]

(2.31) Omega-rule (See rule 2.11)

These RR's show that what was expressed by PSR's can also be expressed by RR's. For example, 28a and 28b state that an NP and an Adv can precede a verb while 28j guarantees that they will not be in the wrong order, and 28f and 28g prevent more than one of each form from preceding the verb. That the main verb of a class may be followed by a sentence complement (as stated in rules 2.24 and 2.25) finds its equivalent expression in 28c which state that the main verb of a clause may be followed by a sister constituent whose head is a verb. By using a double-negation, 28e states that the complement constituent must have as its heads a V and a P; in other words, that it is an exocentric construction. All environments not specifically allowed by rules such as 2.28-2.30 are later excluded by the Omega-rule. In this way, all permissible constructions as well as nonpermissible sequences of the language are accounted for by referring to the contextual features on the lexical heads.

2.4 Basic Notions of Case

The use of case relations in the lexicase model can be attributed to the influence of Fillmore's case grammar, which originally proposed the incorporation of the notion of case into transformational grammar (Fillmore 1966). Fillmore (1968) introduced case relations as categories dominating

NP's in the base component, but subsequently ran into a number of problems, including the fact that by representing case relations as nodes, his approach became subject to Chomsky's criticism (1965:68-74) of grammars which confuse categorial and relational notions. In addition, Fillmorean case grammar over the years has become increasingly abstract, and this tendency has coincided with increasing neglect of the question of the ways in which case relations are realised in various languages.

Lexicase has attempted to overcome these difficulties in various ways. For example, the elimination of transformations avoids the problem of excessive abstractness, and treating case as features of lexical items has helped to solve the problem raised by Chomsky.

Lexicase assumes that both case relations and case forms are basic to the sentence structure of all languages, and thus distinguishes between two types of case features: case relation features and case form features. Neither one is completely predictable from the other. Hence both types of features are basic. Whereas case relation is understood as the syntactically significant semantic relationship between a nominal and its co-occurring predicate, case form is the grammatical realisation or manifestation of case relation. The correspondence between case relations and case forms is by no means bi-unique.

Case relation and case form features marked on heads of nominal constructions provide the context by which verbs can be subcategorised. The combination of case relation and case form features gives rise to a third type of case feature: case frame features. Case frame features are contextual features marked on the lexical head of a construction to indicate the case forms and relations allowed to occur on the lexical heads of its attribute categories.

2.4.1 Case Relations

It is widely recognised that the subcategorisation mechanism of the so-called "Standard Theory" that grew out of Chomsky's *Aspects* model cannot adequately account for syntactic and semantic structures of a language, especially where selectional restrictions between categories are concerned. Fillmore's case theory provided a partial remedy by stating the linguistic environment of a verb in terms of partly semantically defined "cases" like Agent (A), Object (O), Instrument (I), and Experiencer (E). Unfortunately, after nearly a decade of popularity, case grammar, like other semantically or logically based grammars such as generative semantics, has ended up in a blind alley because it has almost completely neglected the actual linguistic structure of sentences in the process of trying to describe the external situations referred to by those sentences. This results in a schism between deep and surface structure, corresponding to that between semantics and syntax, and in the introduction of powerful mechanisms which allow arbitrary and unnatural mappings of situational representations onto linguistic representations known as "surface structure" (cf. Starosta 1982d:11-17).

Unlike other versions of case grammar, lexicase does not identify the case relations in a sentence by applying preconceived semantic definitions to the external situations represented by the sentences. Instead, case relations are established primarily on the basis of syntactic criteria, and are given intensional semantic definitions in accordance with the ranges of semantic characteristics they are found to have. While there are no discovery

procedures for case relations, a couple of heuristic principles proposed by Fillmore (see Fillmore 1971; Pleines 1976:18-32, 95-104) and refined by Starosta (1978) can be employed, one of them being the "1/Sent principle" presented in section 2.4.5 and another being a requirement of co-referentiality or referential inclusion in order for the occurrence of more than one instance of the same case relation in a single clause to be permissible.

For the description of languages, lexicase posits a small universal set of case relations. From this finite set, a subset can be appropriated for the description of any particular language.

A comprehensive set of case relations (see Figures 2.5 and 2.7) has evolved in the course of the development of the lexicase model. Case relations (as opposed to case forms) are by convention given names not ending in *-ive* (cf. Harmon 1977) and are symbolised by three capital letters. The most recent list of case relations is presented in Figure 2.5 below.

AGT	Agent
COR	Correspondent (formerly "Dative" or "Experiencer")
INS	Instrument
LOC	Locus (formerly "Inner Locative")
MNS	Means
NCR	Increment
PAT	Patient (formerly "Object" or "Theme")
PLC	Place (formerly "Outer Locative")
REF	Reference (formerly "Benefactive")
TIM	Time

Figure 2.5 Inventory of Case Relations (Starosta 1982d:17)

Other case relations proposed and used by various lexicase grammarians include Comitative (Taylor 1971; Kullavanijaya 1974; Clark 1978; Ikranagara 1980; DeGuzman 1978), Direction (Taylor 1971; Harmon 1977), Factive (Lee 1974), Manner (Starosta 1971b and 1974; Taylor 1971; Kullavanijaya 1974; Ikranagara 1980), Neutral (Lee 1974), Reason (DeGuzman 1978; Harmon 1977), and Result (Taylor 1971). Alternative nomenclature includes Theme for Patient (Ikranagara 1980), Object or Objective for Patient (Taylor 1971; Li 1973; Kullavanijaya 1974; Lee 1974; Clark 1978; DeGuzman 1978; Harmon 1977), Location or Locative for Locus (Taylor 1971; Li 1973; Kullavanijaya 1974; Clark 1978; Ikranagara 1980; DeGuzman 1978, Harmon 1977), Companion for Comitative (Harmon 1977), the term Correspondent (COR) recently proposed to replace Dative and Experiencer (Fagan 1979; Starosta 1982d), Reference (REF) to replace Benefit or Benefactive (Fagan 1979; Starosta 1982d), and Concomitant (CON) for Comitative or Companion (Fagan 1979). Two new case relations: Means (MNS) and Increment (NCR) are introduced by Starosta (MS b). For an overview of nomenclature for case relations since the inception of lexicase, see Figure 2.7 below.

The numbers 1-13 in Figures 2.6, 2.7, and 2.8 represent usage by different lexicase grammarians at different periods for the description of different languages. (See Bibliography for detailed publication data.) Figure 2.6 identifies the works cited in Figures 2.7 and 2.8 by (a) reference, (b) date of first appearance, and (c) language(s) described.

ITEM	REFERENCE	FIRST APPEARED	LANGUAGES
1	Starosta 1971b, 1976d	1971	Sora
2	Taylor 1971	1971	Japanese
3	Li 1973	1973	Rukai
4	Kullavanijaya 1974	1974	Thai
5	Starosta 1974	1974	Formosan
6	Lee 1974	1974	Kusaiean
7	Clark 1978	1975	Vietnamese
8	Ikranagara 1980	1975	Melayu Betawi
9	DeGuzman 1978	1976	Tagalog
10	Harmon 1977	1977	Kagayanen
11	Starosta 1978	1978	English, German, etc.
12	Fagan 1979	1979	Mono-Alu, Solomon Is.
13	Starosta 1982d	1979	General

Figure 2.6 List of Some Linguistic Descriptions in the Lexicase Model. (This list is the basis for referencing items 1-13 in Figures 2.7 and 2.8)

CR	Description	Article/Thesis/Dissertation	1	2	3	4	5	6	7	8	9	10	11	12	13
[+AGT]	Agent/Agentive		+	+	+	+	+	+	+	+	+	+	+	+	+
[+OBJ]	Object/Objective		+	+	+	+	+	+	+		+	+			
[+THM]	Theme									+					
[+PAT]	Patient												+	+	+
[+NCR]	Increment														+
[+DAT]	Dative		+	+	+	+	+	+	+	+	+				
[+EXP]	Experiencer											+	+		
[+COR]	Correspondent													+	+
[+LOC]	Location/Locative/Locus		+	+	+	+	+	+	+	+	+	+	+	+	+
[+DIR]	Direction			+								+			
[+PLC]	Place							+					+	+	+
[+TIM]	Time		+	+	+	+	+	+	+	+		+			+
[+CON]	Comitative/Companion/Concomitant		+	+		+	+		+	+	+	+		+	
[+INS]	Instrument/Instrumental		+	+	+	+	+	+	+	+	+	+	+	+	+
[+MAN]	Manner		+	+		+	+		+						
[+MNS]	Means														+
[+BEN]	Benefit/Benefactive		+		+	+	+		+	+	+	+	+		
[+REF]	Referent/Reference													+	+
[+FAC]	Factive							+							
[+NEUT]	Neutral							+							
[+RES]	Result			+											
[+RSN]	Reason										+	+			
Number of CR's			9	10	7	9	*	9	9	8	8	10	7	8	10

Figure 2.7 Summary of Lexicase Nomenclature and Use of Case Relations

Since Starosta dealt with a number of Formosan languages in his 1974 paper indicated as item 5, the features marked under item 5 represent a union of CR's found in the descriptions of all the Formosan languages treated in that paper. The total number of CR's at the bottom of column 5 is therefore indicated only by an asterisk (*). Veneeta Acson's description of Greek case marking (1979) is not included in this tabulation because she does not discuss case relations, and Timothy Manley's work on Sre structure (Manley 1972) is also excluded because his treatment is not purely lexicase.

It is interesting to note that, given the assumption of Patient primary (see section 3.1), there exists a consistent syntactically significant semantic difference between two subsets of case relations. The difference between Agent and Instrument, for example, is not a matter of animacy or intention, as has been assumed in earlier work in the case grammar framework, but rather one of immediacy of relation to the Patient (cf. Starosta 1978). Whether an actant directly or indirectly impinges on the Patient characterises a distinction between members of at least three pairs of case relations (cf. Starosta 1982d:20-22):

IMMEDIATE (INNER)	INDIRECT (OUTER)
INS	AGT
LOC	PLC
COR	REF

Figure 2.8 Pairs of Case Relations Distinguished by the Immediacy of their Relation to the Patient

Whereas the Agent is defined as the non-immediate perceived causer of the action designated by the verb, the Instrument is defined as the immediate effective cause of the action or event referred to by the main predicator. The Agent and the Instrument represent the first and the last links respectively in a chain of causation. Precisely the same distinction of immediacy applies to the semantic characterisation of Locus and Place. Whereas the Locus is defined as the (abstract or concrete) location of the Patient, Place designates the general setting of the action or state. The distinction between Correspondent and Referent is exactly analogous to that between Instrument and Agent or Locus and Place. Whereas Correspondent stands in an immediate correspondence relation to the Patient, the Referent is the frame of reference for the whole action, thus having only an indirect relation to the Patient itself. The discovery of this parallelism among the case role definitions and functions, according to Starosta, is made possible only when we take the Patient to be the fundamental and indispensable case role (op.cit.:22).

2.4.2 Case Forms and Localistic Features

2.4.2.1 Case Forms

It has been observed that case relations are manifested in as many overt ways as there are languages (Fillmore 1968; McKaughan 1962; Constantino 1965; and Reid 1964 and 1966), and that the overt case form category is not necessarily predictable from case relations alone because the mapping is not bi-unique,

i.e., there is no one-to-one correspondence between case relations and case forms. For these reasons, and because it is desirable to separate the notions of subject-predicate and of direct object, indirect object, etc. from the notion "case relations", lexicase finds it necessary to mark each noun N for case form as well as case relation. The employment of two sets of case features within a single level of description enables a lexicase grammar to dispense with transformations and references to things like "covert roles" (Fillmore 1968:3-4) or mechanisms like "required co-reference deletion" (Cook 1971:15-16).

As with case relations, the set of case forms is also posited to be universal. From this set, a subset can be drawn to account for any particular language. As Joel L. Fagan (1979:31) aptly puts it:

> Case forms in a lexicase grammar are not language specific syntactic devices, as they are in Fillmorean case grammars (Fillmore 1968:21). Instead they are taken to be universally recognisable syntactic devices which are expressed in different languages by different case markers.

Case forms are features marked on lexical items including nouns (N), prepositions (P), and determiners (Det), but the particular lexical items or morphological desinences which mark them are of course language-specific.

The number of distinct case forms varies from language to language. It seems that the lower limit is set at two with Starosta claiming that "every language has at least a nominative case form NM (the surface structure grammatical subject) and an accusative form AC (surface structure nonsubjects)" (Starosta 1978:4). The upper limit reached by lexicase grammarians so far is eight, with Nominative [+NM], Accusative [+AC], Range [+R], Instrumental [+I], Benefactive [+B], Comitative [+C], Manner [+M], and Locative [+L] (Kullavanijaya 1974). Figure 2.9 presents a summary of case forms used by lexicase grammarians for the description of various languages.

As in Figure 2.7, the features marked under item 5 in Figure 2.9 represent a union of CF's found in all the Formosan languages treated in Starosta's 1974 paper. The total number of CF's at the bottom of column 5 is therefore also indicated only by an asterisk (*). As for item 11, due to the general nature of the discussion, there is no indication as to whether the list of CF's is intended to be exhaustive (cf. Starosta 1978:4-5). The total number of CF's for this item is therefore also indicated by an asterisk. In item 13 (Starosta 1982d), case forms are not discussed, hence its omission in Figure 2.9.

Case forms are necessary to characterise such grammatical functional notions ("Grammatical Relations") as "subject-of" and "direct-object-of" a sentence (Chomsky 1965:68-74), notions which have caused much confusion in the study of case. According to Fillmore (1968:6-8), such confusion arises from the fact that, in traditional studies of case in Latin and Greek, the concept "subject of the sentence" was wrongly assumed to be straightforward and clear and thus the nominative was largely neglected. Fillmore also points out that the classificatory criteria for case uses have been confused in the past, especially for the uses of case which can be classified on syntactic grounds. When it comes to the description of non-Indo-European languages such as the Philippine languages, even more confusion arises as a result of a prevalent tendency to break away from Indo-European tradition and proliferate innovative terminology (cf. McKaughan 1973:121-123). Influenced by the common use of the term "topic" for grammatical subjects by Philippinists such as McKaughan

CF	Descriptions	Articles/Theses/Dissertations	1	2	3	4	5	6	7	8	9	10	11	12
[+NM]	Nominative		+	+	+	+	+	+	+	+	+	+	+	+
[+AC]	Accusative		+		+	+	+	+	+	+	+		+	+
[+L]	Locative		+	+	+	+	+	+	+	+	+	+	+	+
[+I]	Instrumental		+	+	+	+	+		+	+				+
[+C]	Comitative		+	+		+	+		+	+	+	+		+
[+B]	Benefactive		+			+			+	+	+	+	+	
[+G]	Genitive		+				+					+	+	
[+O]	Objective			+										
[+D]	Dative			+				+	+					
[+R]	Range					+								
[+M]	Manner					+	+			+				
[+DR]	Directional							+						
[+R]	Reason										+			
[+AB]	Absolutive													+
[+CN]	Contrastive											+		
Number of CF's			7	6	4	8	*	5	7	7	6	6	*	6

Figure 2.9 Summary of Lexicase Nomenclature and Use of Case Forms

(1962), Fillmore made a distinction between "primary topicalisation" (subjectivalisation) and "secondary topicalisation" (Fillmore 1968:57-58). However, this terminological infelicity has now been rendered unnecessary, since McKaughan (1973) has reconsidered the use of the term "topic" by many Philippinists and concluded that this term was misleading and that "subject" is a completely appropriate term for this category.

Proposing a set of case form features apart from case relation features in lexicase helps to sort out case relations and case forms as naturally bounded subsets within the set of formal universal grammatical functional notions. Thus such notions as subject, topic, direct and indirect object, active and passive voice, etc. will be accounted for with reference to case forms, while ill-defined notions such as "logical subject", "logical object", etc. will be explained in terms of case relations.

2.4.2.2 Localistic Features

Case forms may also carry semantic information of the sort that indicate location, direction, or orientation. Other than the purely syntactic case forms such as Nominative [Nom], and possible Accusative [Acc] and Genitive [Gen], case forms in a lexicase grammar are analysable as complexes of location and direction components. For example, Clark's analysis of Vietnamese (1978:39-50) employs such localistic features as [±lcn] (location), [±dir] (direction), [±src] (source), [±ext] (extent), [±gol] (goal), and [±ter] (terminus), to subcategorise the locative case form [+L] which realises the case relations [+LOC], [+TIM], [+DAT], and [+OBJ]. The lexicase approach to case forms is therefore "localistic" (cf. Anderson 1971; Acson 1979).

While classical localistic theories were concerned with the analysis of case inflections into meaningful components, in lexicase the localistic approach is

extended to prepositions, relator nouns, and even verbs as well (cf. Starosta 1978:4-5). For example, in her study of Tagalog verbs (1978), Videa DeGuzman uses localistic case form features such as [+loc], [+dir], and [+goal] supplemented by morphological and voice-related features such as [±erg] in subclassifying Tagalog verb stems and analysing Tagalog voice inflection.

In Veneeta Acson's analysis of the case-marking systems of Classical and Modern Greek (Acson 1979), the meanings of prepositions as well as of case inflections are analysed into local semantic components in terms of their semantic similarities and differences. In Classical Greek, prepositions and nominal case inflections combine into a unified system of case marking. The grammatically significant meaning of a prepositional phrase is then a function of the meanings of the case relations on the head noun and the localistic features on the preposition and on the case-inflected noun. Acson subdivides prepositions in Classical and Modern Greek according to the following set of local semantic features: relational, surface, association, vertical, comitative, circumambience, source, intimate, interior, prolative, terminus, path, side, and proximate (Acson 1979:240). Localistic features compatible with those assigned to prepositions are also assigned to inflected nominals to account for the fact that these inflections add information to the meaning contributed by the case relations. Of the five case inflections in Classical Greek, namely, nominative, vocative, dative, accusative, and genitive, the first two are non-local cases while the remaining three are local. Each of these three oblique cases is identified by a specific matrix consisting of local features, as shown by the following case inflection tree (ibid.:63):

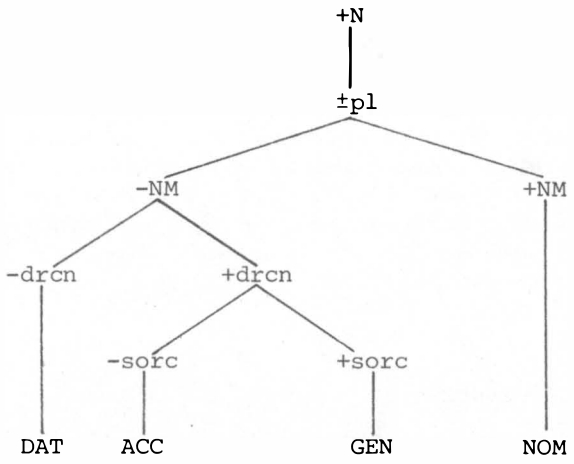


Figure 2.10 Basic Classical Greek Case Inflection Tree

Acson has thus analysed all case form features (except [Nom]) in Classical Greek into localistic features in accordance with the following set of correspondences (cf. op. cit.:245):

NOMINATIVE:	[+NM]	
DATIVE:	[-drcn]	drcn = "direction"
ACCUSATIVE:	[+drcn,-sorc]	sorc = "source"
GENITIVE:	[+drcn,+sorc]	

Localistic features are treated as "sub-CF features" by Clark (1978:39) and characterised as "local semantic features" by Acson (1979:47). Both terms are appropriate in the sense that localistic features are semantic features of location, direction, and orientation that further analyse case form features into meaningful components.

Having been analysed into meaning localistic components, conventional lexicase CF's such as [+AC] and [+L] as well as corresponding traditional labels such as "Ablative", "Dative", etc. are in a strict sense no longer needed as a formal part of the grammar. They have been supplanted in all cases except [+NM] by clusters of localistic features. Whether or not we should retain the term "case form" alongside localistic features is really a terminological question. However it is resolved, it remains true that these features do form a coherent and probably universal set, allowing the theory to account for the fact

> (1) that all languages can express the same set of concepts, even though particular aspects of the meaning may be contributed mainly by case inflections (Hungarian), prepositions (English), or verb classes (Tagalog); and
> (2) that the locus of these features can switch categories, as in coverb derivation (the derivation of prepositions from verbs; Clark 1978) and the formation of case inflections from captured postpositions (Starosta 1978:5).

The incorporation of localism into lexicase allows us to extend case realisation beyond nominal constituents and to better interpret the verbal case marking or "focus" system in languages of the Philippine type such as Tagalog. In my analysis of Nataoran Amis, I have also used localistic features to characterise and hence subcategorise some of the motion verbs that carry with them the meaning of direction.

In the present study, I have gone one step beyond Clark, DeGuzman, and Acson in replacing all CF features (with the exception of Nominative) by corresponding localistic features on nouns, prepositions, and determiners. That is, the case forms of earlier lexicase analysis, which have been properly criticised by John Anderson as being arbitrary and/or redundant (Anderson 1977:64-69), have been replaced by localistic semantic components which closely approximate the localistic "case relations" posited by Anderson himself. The lexicase approach, however, still differs from Anderson's framework in locating these elements in the lexical representations of words (in surface structure) rather than in extremely abstract syntactic-semantic representations. For details of this localistic analysis of Amis case forms, see section 4.1.

As mentioned above, case forms are not language specific, but their manifestations are. Case forms indicating the presence of certain case relations are in turn given overt expression by the case marking system of the language. The case marking mechanism used to explicitly mark case forms and express case relations is language particular. Depending on the language, it may be done through noun or verb choice, affixation of the verb, use of prepositions or postpositions, constraints on word order, case inflection of nouns or pronouns and articles (and adjectives), or a combination of these devices. In other words, languages use specific lexical, morphological, and syntactic devices to directly or indirectly indicate the presence of a case form on a nominal constituent.

Case marking has been understood as an overt morphological affixation or modification of a noun stem, as is found in case-inflected languages such as

Latin, Greek, and Telugu. This type of case marking corresponds to the traditional notion of case inflection. In recent treatments of case grammar, however, the concept of case marking has been extended to cover any syntactic or morphological configuration that has the same function as the case inflections do in Latin, including but not limited to syntactic and morphological properties of the NP's and PP's which bear case relations. In order to capture cross-linguistic and diachronic generalisations, in fact, lexicase has broadened the concept of case marking to include grammatical categories manifested by non-nominal devices such as verbal subcategorisation and verbal inflection (DeGuzman 1978).

2.4.3 Patterns of Correspondence between CF and CR

In the previous sections we have shown that case forms are grammatically associated with case relations on the one hand and with overt case markings on the other. While case marking is language specific, the association or correspondences between case relations and case forms demonstrate patterns that may be of universal interest.

It is important for the description of any language to give an account of the ways in which case relations correspond to case forms and the ways in which case forms are realised. Of particular interest is the tendency or preference for certain case relations to be associated with certain case forms, especially when such a tendency is manifested by a group of languages. One such generalisation that can be drawn through cross-linguistic study of correspondence patterns is the "Subject Choice Hierarchy" for accusative languages (cf. Fillmore 1968). In Fillmore's framework, the correspondence between "deep" case relations and "superficial" grammatical subjects is treated as "subjectivalisation". According to him, subjectivalisation is one of the various mechanisms by which "deep structures ... are converted into surface representations of sentences" (ibid.:32). It is a transformational mapping of case relations, deep structure categories, onto surface configurations. The relation "subject-of" is transformationally introduced prior to the surface structure.

In lexicase the correspondence between CR's and CF's (including sub-CF localistic features) is expressed by jointly specifying the CR and the CF in the same feature matrix in a single level of representation. For example, the features [Nom,+PAT] marked in the lexical matrix of a noun mean that the Nominative case form is associated with the Patient case relation. By convention, the CF precedes the CR in the matrices, although of course this ordering has no theoretical significance. Localistic features, being sub-CF features, also precede CR features in the listing. Examples are: [+L,+src,+ext,+LOC] and [+L,+ter,+DAT] from Clark (1978:42,49).

Starosta (1978:6) suggests a rather neat way of characterising four of the major syntactic word classes in terms of these CR and CF features. Considering case to be an inherent feature of nouns, Starosta thinks that the category Noun could be universally defined as "that category which carries a case relation and a case form" as opposed to Adverbs, which may carry only CR's, and Verbs and Prepositions, which may be marked for CF but not CR.

The correspondence between CR's and the nominative case form is of particular interest in grammatical descriptions, since the case form [Nom] is frequently

equated with the "subject" in a subject-predicate construction. Within the lexicase framework, the assignment of [Nom] to a noun makes that noun the grammatical subject of a sentence. We say that the particular CR marked on this [Nom] constituent is the case relation chosen or selected as subject of the sentence. Subject choice or subject selection is dependent on the verb and the requirement it places on co-occurring actants, each of which is associated with the verb in a particular case relationship. With respect to subject choice, Fillmore (1968:33) makes the following observation:

> For most combinations of cases there is a 'preferred' or 'unmarked' subject choise; for some there is no actual choice — the subject is uniquely determined. In general the 'unmarked' subject choice seems to follow the following rule:
>
> If there is an A, it becomes the subject; otherwise, if there is an I, it becomes the subject; otherwise, the subject is the O.

If we apply Fillmore's hierarchy to a lexical analysis, we would expect that, for English at least, if an actant is marked [+AGT], it should normally be chosen over those marked by [+INS] or [+PAT] as subject of the sentence. If there is no [+AGT], then [+INS] is chosen over [+PAT] when both are present. Otherwise, [+PAT] becomes the subject. Fillmore further notes that, "the notion 'subjectivalisation' is useful only if there are sentences to a language which offer a choice of subject" (op. cit.:58). From Fillmore's point of view, subject choice provides a convenient way to account for typological distinctions. In case grammar terms, the various arrays of cases define the notion of clause types and "provide the categorial and configurational information for determining the surface distinctions that are found" in languages (ibid.:54-55). Fillmore has redefined the traditional terms "nominative" and "accusative", "ergative" and "nominative", "active" and "inactive", by referring to the surface manifestation of his A and O in transitive and intransitive sentences.

Lexicase has further developed the Fillmorean concept of case form determination by defining Patient as the central case relation and by establishing case forms as a separate parameter for grammatical description. Subject choice and typology can then be formally and explicitly expressed in terms of the association of [Nom] with a certain CR in the following way: in ergative-type languages, [Nom] is always mapped onto [+PAT]. In non-focus languages of the accusative-type, [Nom] is normally mapped onto a particular CR in accordance with Fillmore's hierarchy.

Associated with subject choice are the notions of "voice" and "focus". Traditionally, voice refers to the modification of the verb stem to indicate differences in subject choice. For example, the choice of [+PAT] as subject of transitive verbs in English requires that the verb appear in the passive voice. The verb is said to be in its active voice if some other CR is chosen as the subject instead, normally in accord with the Fillmorean subject choice hierarchy. In languages where more than two CR's can be candidates for subjecthood for a given verb, the two-way distinction between active and passive voice may become inadequate to register verbal CR concord. In Maranao, for instance, some verbs have a considerable amount of freedom to choose the subject from among the [+AGT], [+PAT], [+INT], and [+REF] CR's. The subject-marking preposition so is associated with whichever actant is

chosen to be the subject, while a verbal affix indicates the case relation category of the NP marked by so (cf. McKaughan 1962:47; Fillmore 1968:55). Voice inflection associated with multiple possibilities of subject choice in Philippine and Formosan languages is commonly referred to as "focus".

Maranao examples from McKaughan (1962:48; cited in Fillmore 1968:55) showing Agent-focus (AF), Patient-focus (OF; from "object-focus"), Instrument-focus (IF), and Referent-focus (RF) are given below. (The feature matrices are given in lexicase notation. Although a thorough lexicase analysis of Maranao could mean reassignment of some case relations, say, [Lcv,+LOC] instead of [Lcv.+PAT] for ko karabao in 2.32c, I have deliberately chosen the present analysis to illustrate the supposed relationship between subject choice and focus.)

(2.32a) AF: somombali? so mama? sa karabao

$$\begin{bmatrix} +V \\ +[+AGT] \\ +[+PAT] \\ -\begin{Bmatrix}\text{Nom}\\ -AGT\end{Bmatrix} \\ -\begin{Bmatrix}\text{Acc}\\ -PAT\end{Bmatrix} \end{bmatrix} \quad \begin{pmatrix}\text{Nom}\\ +AGT\end{pmatrix} \quad \begin{pmatrix}\text{Acc}\\ +PAT\end{pmatrix}$$

the man butchers the carabao

(2.32b) OF: sombali?in o mama? so karabao

$$\begin{bmatrix} +V \\ +[+AGT] \\ +[+PAT] \\ -\begin{Bmatrix}\text{Nom}\\ -PAT\end{Bmatrix} \\ -\begin{Bmatrix}\text{Gen}\\ -AGT\end{Bmatrix} \end{bmatrix} \quad \begin{pmatrix}\text{Gen}\\ +AGT\end{pmatrix} \quad \begin{pmatrix}\text{Nom}\\ +PAT\end{pmatrix}$$

the carabao is the thing that the man butchers

(2.32c) IF: isombali? o mama? so gelat ko karabao

$$\begin{bmatrix} +V \\ +[+AGT] \\ +[+PAT] \\ +[+INS] \\ -\begin{Bmatrix}\text{Nom}\\ -INS\end{Bmatrix} \\ -\begin{Bmatrix}\text{Gen}\\ -AGT\end{Bmatrix} \\ -\begin{Bmatrix}\text{Lcv}\\ -PAT\end{Bmatrix} \end{bmatrix} \quad \begin{pmatrix}\text{Gen}\\ +AGT\end{pmatrix} \quad \begin{pmatrix}\text{Nom}\\ +INS\end{pmatrix} \quad \begin{pmatrix}\text{Lcv}\\ +PAT\end{pmatrix}$$

it is with the knife that the man butchers the carabao

(2.32d) RF: sombali?an o mama? so major sa karabao

$$\begin{bmatrix} +V \\ +[+AGT] \\ +[+PAT] \\ +[+REF] \\ -\begin{Bmatrix} Nom \\ -REF \end{Bmatrix} \\ -\begin{Bmatrix} Gen \\ -AGT \end{Bmatrix} \\ -\begin{Bmatrix} Acc \\ -PAT \end{Bmatrix} \end{bmatrix} \quad \begin{bmatrix} Gen \\ +AGT \end{bmatrix} \quad \begin{bmatrix} Nom \\ +REF \end{bmatrix} \quad \begin{bmatrix} Acc \\ +PAT \end{bmatrix}$$

it is for the mayor that the man butchers the carabao

In each of the sentence examples, the subject marker so and the focus or voice inflection on the verb stem sombali? *to butcher* are underlined.

From these examples, we can also see that the correspondence between CR's and CF's in such languages is not one-to-one. The nominative [Nom], for example, can be matched with any one of the four case relations: [+AGT], [+PAT], [+INS], and [+REF]. The [+PAT] case relation, in these examples, can be matched with three different case forms: [Acc], [Nom], and [Lcv].

2.4.4 Case Frame Features

The array of case relations that co-occur with each verb constitutes its case frame. Case frames are contextual features which allow primary verb stems to be broadly subcategorised in terms of the grammatically allowable presence or absence of particular case relations in the verb's syntactic context.

According to Starosta (1978:34), "a lexicase grammar allows only a very limited set of major verb categories. Every verb in the language must fit into one of probably eight or nine categories, and every new verb that enters the language by derivation or borrowing must fit itself into one of these same categories". Using the inherent case relation features [+PAT], [+AGT], [+COR] and [+LOC], we have nine possible syntactic verb categories coming from branches of the tree in Figure 2.11 (cf. Starosta ibid.). Note that the former EXP has been replaced by COR in the current framework. Letting X represent any CR feature, [-[+X]] means non-co-occurrence with a sister constituent marked X, while [+[+X]] means obligatory co-occurrence with X. For example, [-[+AGT]] means "does not occur in the environment of a sister marked AGT" and [+[+AGT]] means "must occur with an AGT sister".

Contextual features may involve more than one feature. The one or more contextual features which jointly specify the case-related context in which a verb may occur constitute the verb's "case frame". The case frame is shown in an unordered collection of case-related contextual features, either lined up in a row and separated by commas or stacked up in a column. In example 2.33, the (a) and (b) forms are equivalent representations of the case frame for a Class VII location verb such as "put" (cf. Figure 2.11).

(2.33) (a) [+[+PAT]],+[+AGT],-[+COR],+[+LOC]]

(b)
$$\begin{pmatrix} +[+PAT] \\ +[+AGT] \\ -[+COR] \\ +[+LOC] \end{pmatrix}$$

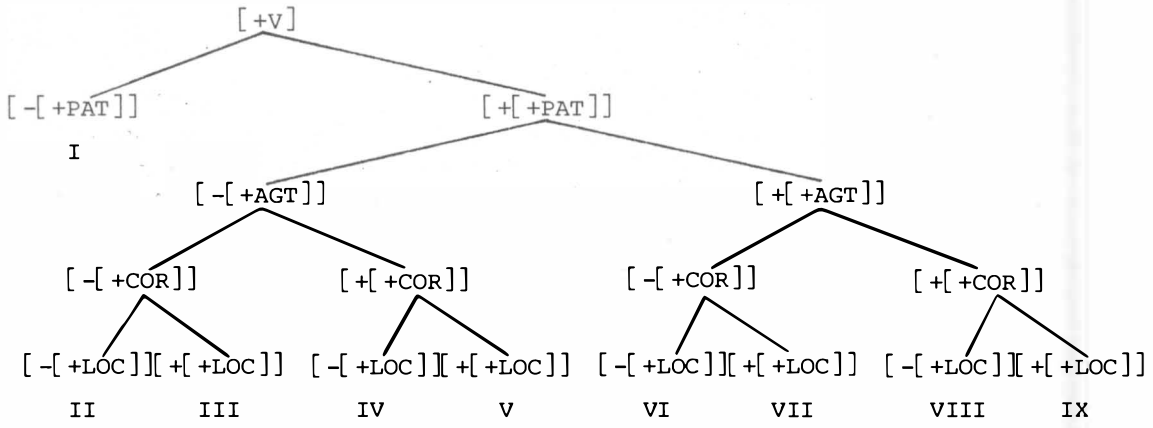


Figure 2.11 Subcategorisation of Verbs by Case Frame Features

For all contextual features, including case frame features marked on verbs, two layers of square brackets are required, the inner brackets enclosing the case feature that serves as the context and the outer brackets representing the whole feature matrix of the lexical item and enclosing information on co-occurrence (marked by +) or non-co-occurrence (marked by -) in such context. Information on sequential order is given by a line before or after the inner brackets to indicate respectively the position preceding or following the constituent marked by the particular CR feature. If the line is omitted, it means that the constituent with the CR in question may either precede or follow the constituent with the specified CR. Letting X be any non-contextual feature, we may have positive contextual features of the following forms: [+__[+X]],[+[+X]__], and [+[+X]], meaning obligatory occurrence before, occurrence after, and co-occurrence with (irrespective of order) the sister constituent specified by [+X] (with or without intervening material), and the negative counterparts [-__[+X]], [-[+X]__], and [-[+X]] meaning respectively non-co-occurrence before, after, and with the constituent specified by [+X].

Non-obligatory co-occurrence is indicated by the use of parentheses around the feature(s) in the inner brackets; i.e., the feature or features that serve as context. Whereas [+__[+X]] reads "must occur before [+X]," a contextual feature of the form [+__([+X])] reads "may or may not occur before [+X]". Its negative counterpart is formally superfluous, and is not used.

The case frames characterising the nine possible major syntactic categories of verbs shown in Figure 2.11 are as follows:

CATEGORY	CASE FRAME
I	[-[+PAT]]
II	[+[+PAT],-[+AGT],-[+COR],-[+LOC]]
III	[+[+PAT],-[+AGT],-[+COR],+[+LOC]]
IV	[+[+PAT],-[+AGT],+[+COR],-[+LOC]]
V	[+[+PAT],-[+AGT],+[+COR],+[+LOC]]
VI	[+[+PAT],+[+AGT],-[+COR],-[+LOC]]
VII	[+[+PAT],+[+AGT],-[+COR],+[+LOC]]
VIII	[+[+PAT],+[+AGT],+[+COR],-[+LOC]]
IX	[+[+PAT],+[+AGT],+[+COR],+[+LOC]]

Figure 2.12 Case Frame Features of Verb Categories

Actually, only the positive features would have to be listed in the lexicon, since the negative ones are predicted by the Omega-rule (cf. section 2.2.2.2). Hence the single feature [+[+PAT]] is sufficient to identify verb category II, while [+[+PAT] +[+AGT]] uniquely identifies category VI.

A double negation notation is adopted in lexicase convention to indicate agreement relations between two constituent heads. A contextual feature of the form [-[+X,-Y]] marked on an item of class [+Z] is to be interpreted as an obligatory paradigmatic solidarity between the two features X and Y in the environment of Z. It would allow the following three combinations to be marked on a sister of Z: (1) +X,+Y, (2) -X,-Y, and (3) -X,+Y, but not (4) +X,-Y. For example, the association of CR's with CF's can be stated in terms of features such as -[Nom,-PAT], which states that if a verb has a subject at all, it may only accept a nominal actant with the Patient case relation to be its subject, i.e., to be associated with the [Nom] case form. The notation simply states that, if a subject occurs, it cannot simultaneously be marked as [-PAT].

An implicational dependency can be expressed using the following lexicase convention. Two features in the same matrix can be associated by the logical implication symbol "$\supset$", as in [$\supset$[+X,αY]], to mean that if X is present, αY is expected. This notation is used to represent selection restrictions, semantic implications which can be violated without necessarily affecting grammaticality. The notation is used primarily in the statement of derivational rules. (see Rule 2.13a above)

2.4.5 The 1/Sent Constraint

In section 2.3 six contraints imposed on possible grammars by the lexicase model have been listed. To these we now add a very crucial constraint on the assignment of case relations which can be stated as follows: "no case role appears more than once in a single clause" (Starosta 1982d:5). This constraint, referred to by Starosta as "The 1/Sent [one-per-sentence] constraint" is based on Fillmore's "one-instance-per-clause" principle for case assignment (cf. Fillmore 1971:38; Pleines 1976:21,98-104) but turns out to be a much stronger constraint than the Fillmorean counterpart, since it cannot be evaded through the postulation of extremely abstract deep structures in the way that it can through the use of transformations in Fillmorean case grammars.

Fillmore uses situational roles as criteria for case relation assignment. In view of the great difficulties entailed by this practice in attempting to make general statements about how case relations map onto surface configurations, Starosta (1982d:9) feels that it is best to define case relations syntactically, with the 1/Sent constraint serving as a "universal metatheoretical principle of clause construction". In imposing this requirement, lexicase is able to cut through the tangle of multiple semantic interpretations associated with situational roles and avoid any direct reference to perspectives which come into play in Fillmore's new autonomous deep structure level. By upholding the 1/Sent principle, the choice and assignment of case relations can be justified in a systematic way, leaving less room for subjective guesswork or personal preference. Starosta is able to show that, within the lexicase framework where syntactic criteria are the primary considerations, there can be a simple and straightforward system of verbal classification and derivation, case assignment and subject choice without appealing to otherwise unmotivated transformations or arbitrarily increasing the case relation inventory.

In his paper entitled "The One Per Sent Solution" (1978), Starosta demonstrates how some of the problems raised by Fillmore can be solved within the lexicase framework. For example, problems related to the assignment of case relations to NP's with part/whole or inclusion relations, as well as to the multiple occurrence of time and location actants, problems which forced Fillmore to add a number of new CR's such as Path, Source, etc. to his inventory, can be adequately handled within the lexicase framework without the addition of new and empirically debilitating formal mechanisms. Instead, lexicase handles these problems by allowing for multiple occurrences of CR's with shared reference, and new CR's. More importantly, Starosta demonstrates that the 1/Sent constraint makes correct predictions about the properties of morphological causative verbs, properties which have only been described but not explained in other frameworks of linguistic description.

2.4.6 Summary

In summary, the notions of case relations, case forms and case markers have been distinguished. Case relations are syntactically significant semantic relations between nominals and constituent heads. Case forms and localistic case form features are features introduced by lexicase to account for traditional grammatical subject and object, as well as case inflection categories such as nominative, accusative, dative, and other cases, which Paul Li (1973:110) calls the "surface cases", as well as other syntactic or morphological configurations with similar functions. Both case relations and case forms are language universal. The description of a particular language makes use of some or all of these features. Case markers are the actual overt realisations of case relations and forms in a sentence. Case marking is language specific. Depending on the language, verb classes, prepositions or postpositions, determiners, relator nouns, nominal and/or verbal inflection, word order, or a combination of these may be utilised for case marking.

The 1/Sent Constraint is introduced in connection with CR assignment; CF's (with the probable exception of [Nom]) are not subject to this constraint.

Case frame features are provided as a device for the classification of verb stems and for stating co-occurrence restrictions between constituents, or between features in the same matrix in a syntactic attribute of a head word.

In Chapter 3, each case relation used in the present description of Amis will be presented, and the realisation of each case relation by localistic case form features and case markers in Amis will be described and illustrated in Chapter 4.

CHAPTER 3

CASE RELATIONS IN AMIS

Starosta (1974:301) gave the following list of case relations for Nataoran Amis:

AGT, BEN, COM, DAT, INS, LOC, OBJ, TIM.

With changes in labels to conform to current notational conventions, and assigning the name PLC to the former Outer Locative, Starosta's inventory corresponds to the following list:

AGT, REF, CON, COR, INS, LOC, PLC, PAT, TIM.

It is found in this study that although some Amis nominal actants meet the semantic characterisation sometimes associated with the notions of RSN (Reason), MNS (Means), and NCR (Increment) realised as separate case relations in some languages (cf. summary in Figure 2.7 of section 2.4.1), in Amis at least, they can be formally assigned to one of the CR's listed above. In the present analysis, CON (Concomitant) and COR (Correspondent), for instance, are treated as types of LOC, to be realised by distinctive sets of localistic case form features, thereby reducing the CR inventory and capturing more generalisations.

In Amis, the situational role associated with the Manner case relation in lexicase descriptions of other languages is signalled exclusively by verbal complementation, a device which is also used frequently in Amis as an alternative to the use of nominal actants to encode the notions of instrument, place, and time.

In the present study, then, following the convention that all feature symbols are to be enclosed in brackets and marked either by a plus (+) or a minus (-), we have the following inventory of case relation features marked on Amis nouns:

[+AGT]	Agent	[+PAT]	Patient
[+INS]	Instrument	[+PLC]	Place
[+LOC]	Locus	[+TIM]	Time

As we have mentioned in section 2.4.1, the lexicase model assumes that Patient is the fundamental case relation. Following this assumption, Starosta finds a consistent syntactically significant semantic difference between two subsets of case relations, the inner and the outer CR's as defined in terms of the immediacy of their relationship with the Patient. Here I repeat Figure 2.8 from section 2.4.1 above for easy reference.

IMMEDIATE (INNER)	INDIRECT (OUTER)
INS	AGT
LOC	PLC
COR	REF

Figure 2.8 Pairs of Case Relations Distinguished by the Immediacy of their Relation to the Patient

In Amis, the inner COR is treated as a type of LOC while some of the functions of REF are subsumed under PLC. Nevertheless, the distinction between the inner and outer case relation still holds. It now appears that there may be other problems involved in treating Agent as an outer case relation, especially with regard to the fact that Agent subcategorises verbs but that other outer case relations don't. However, this has broad theoretical implications which cannot be gone into in a descriptive work such as this.

In regard to case assignment, the lexicase approach is significantly different from the Fillmorean approach where the choice of criteria is concerned. Fillmore operated with the principle that once an entity is perceived to have a certain given function with respect to a given state or action, it is required to have the same grammatical function in all sentences related to what was objectively the same external situation. However, Starosta (1982d:25-29) does not agree with Fillmore about always assigning the same grammatical function to the NP whose referent has the same role in the same external situation. He argues that the grammatical function of an entity does change with a change in Fillmore's "perspective".

In lexicase, case assignment may change in lexical derivation. With a change in the case frame of verbs, the mapping between case relations and situational roles may also change. Thus, in the assignment of CR's, one should look at properties of the sentence itself, not only at the situation it corresponds to. This is a fundamental difference between Starosta and Fillmore. The resolution of this difference will depend on which approach allows the grammarian to capture more syntactic generalisations.

This chapter will be devoted to a discussion of the individual case relations in Amis, their realisations, and, in the Ramification section under each CR, some alternative ways of expressing similar notions.

3.1 The Patient Case Relation [+PAT]

The Patient case relation is the fundamental case relation in a lexicase grammar. By fundamental we mean that if a verb has only one co-occurring actant, it must be [+PAT], not counting of course the non-inherent or peripheral case relations of [+PLC] and [+TIM] that can occur in practically any sentence regardless of the choice of verb. If a verb has only one co-occurring nominal actant in the Nominative case form, it is always the Patient. It follows that all intransitive verbs with only one nuclear actant have a Patient subject if they have a subject at all (that is, if they are not subjectless).

The Patient case relation is also semantically central to a case system in that other case relations and complement types can be characterised in terms of the immediacy of their relationship with the Patient. Inner case relations and inner complements are essential to the subclassification of verbs and are, in the present analysis, treated as obligatory. Also, there is the requirement that the unexpressed subject of an inner complement should be co-referential with the subject Patient of the higher verb. Outer complements, like outer CR's, are optional. Moreover, the requirements that the subject of an embedded S be unexpressed and that it should be co-referential with the Patient of the higher verb need not apply to outer complements.

3.1.1 Characteristics

The Patient case relation has been previously labelled as OBJ (Object) or THM (Theme) in earlier lexicase descriptions. Starosta later found these two labels to be potentially confusing since Object may be confused with "direct object" which, in its traditional usage, refers only to an association of this case relation with the Accusative case form, and the term Theme which Ikranagara (1980) took from Grüber and Jackendoff who used it to refer to this case relation, is used by Prague School grammarians and their followers working in information structure to refer to the object about which new information, i.e. the theme, is predicated. In the present study, the term Patient is adopted and used in roughly the same way Lyons (1968) and Chafe (1970) have intended.

An entity marked by [+PAT] is characterised by Starosta (1978:9), following Grüber and Jackendoff, as one of the following, depending on the verb class with which it co-occurs:

(a) the entity which is viewed as affected by the action of the verb,

(b) the entity which is viewed as moving or as being located in space,

or (c) the entity which is viewed as existing in a state, or whose state is changing.

Fillmore, in referring to the Objective case relation, also recognises it to be "the semantically most neutral case, the case of anything representable by a noun whose role in the action or state identified by the verb is identified by the semantic interpretation of the verb itself" (Fillmore 1968:25). In general, it refers to that element which is affected by the action, or whose state or existence is identified by the verb. It is due to this wide range of semantic shadings that Fillmore calls his Objective case relation a "waste basket". However, because of Fillmore's reliance on situational criteria and selectional restrictions, he does not assume his Objective case relation to be fundamental in the same way that it is in lexicase.

In lexicase, the Patient case relation may subsume several case-like notions that have been treated as distinct case relations in other case grammars, including Experiencer and Result/Factitive with intransitive verbs. In Sora, for example, these notions can be treated as the interpretations given to the "neutral" Patient case relation when it appears respectively with psychological and creative verbs (cf. Starosta 1976:1073-1078).

In Amis, the Patient case relation is indispensable for transitive and intransitive verbs alike, including verbs that indicate existence, location, and possession. Depending on the verb, a Patient may occur alone, with an Agent, an Instrument, a Locus, a Referent, or with any combination of these, provided that the number of nominal actants in the case frame of the verb does not exceed three.

Certain verb classes in Amis impose special selectional implications on their Patient actants. For example, meteorological verbs imply that their subjects, if any, should be indicative of only time or place as in the following sentences:

(3.1) ma-kotem kina remiad
cloudy *this* *day*
[+V] [Nom, +PAT]
it is cloudy today

(3.2) caay henay ka [si-solda] ko Nataoran
not *ever* *have-snow* *Nataoran*
[+V, +fint] [+Adv, +mnnr] [+P] [+V, -fint] [Nom, +PAT]
it never snows in Nataoran

In these sentences, we can say that the notions of time or place are subsumed under the neutral and basic Patient case relation when they occur as the subject of verbs that indicate meteorological phenomena.

In Amis, verbs derived from nominals that can be interpreted as being the situational instrument of the actions represented by the derived verbs normally require abstract subjects that are derived nouns. Here is an example:

(3.3) kamay-en ko sa-pi-bacaq noniam
do-by-hand *means-of-laundering* lexcl
[+V, +ergv, -[Nom, -PAT], +inst] [+N, +abst, Nom, +PAT, +inst] [Gen, +LOC]
abst = "abstract"
we launder by hand
Lit. *our means of laundering is by hand*

In this sentence, the predicate is a verb and thus carries no case relation at all, while the subject nominal is assigned the Patient case relation instead of Instrument in accordance with the lexicase requirement that CR be assigned primarily with reference to syntactic rather than situational criteria.

The equational counterpart of example 3.3 would also have its subject marked [+PAT]. Here is a similar example:

(3.4) o baqdet-ay a nanom ko sa-pi-bacaq noniam
hot-object *water* *means-of-laundering* lexcl
[Neu] [+N, +abst, Nom, +PAT, +inst]
we launder with hot water
Lit. *our means of laundering is hot water*

The semantic distinctive features [+inst] (instrumental) and [+abst] (abstract) are introduced into the feature matrices of nouns such as sa-pi-bacaq by a lexical derivational rule, and these features satisfy the selectional implications of denominal verbs such as kamay-en in example 3.3.

In this analysis, the subjects of non-verbal constructions including equational sentences will always be assigned the Patient case relation, and the predicate noun carries no CR at all. That is, the Neutral case form (Neu) in the example above marks a nominal predicate. As a predicate it does not have a CR; it is only marked by a CF. Note that in these examples the Nominative (Nom), Genitive (Gen), and Neutral (Neu) case forms are not marked with either + or -. Instead, the symbols Nom, Gen, Neu, etc. are used as convenient cover labels for bundles of localistic case form features (see section 2.4.2.2 and section 4.1). Later in Chapter 6, however, these cover labels, like that of [±trns] (transitive) and of [±ergv] (ergative), are treated as unit features and marked by + or - in "double negation" and "horseshoe" notations to indicate correspondences between contextual features of the verbs.

Central to the system of case analysis is the Patient case relation. In the following we shall discuss (1) the basic lexicase claim that PAT is the fundamental CR and (2) the traditional role of "object" and the assignment of CR.

In the lexicase model the Patient case relation is regarded as the fundamental case relation. Except for impersonal verbs, Patient is required in every case frame. If a verb has only one obligatory nominal actant, it is necessarily a Patient which is necessarily realised in the Nominative case form with all non-impersonal verbs. Since case assignment in lexicase refers primarily to syntactic criteria and not to situational roles, many of the Fillmorean case relations have been reanalysed as being none other than the Patient case relation. The subject nominals in the following examples (3.5-3.13) are all assigned the Patient case relation even though, from a Fillmorean vantage point, their roles would be varied. The Patient case relation in these examples is in a way a neutralisation or centralisation of different situational roles, corresponding to the Fillmorean notions of agent, instrument, experiencer, time, and place. Fillmore would probably assign different case relations to these subject nominals even though there is no difference in morphological or syntactic properties.

(3.5)

ma-calibad	kako
angry, furious	1s
[+V]	(Nom, +PAT)

I am angry

(3.6)

ma-olah	kako	itisoan
love	1s	2s
[+V]	(Nom, +PAT)	(Lcv, +LOC)

I love you

(3.7)

ma-talaw	kako	tira	tamdaw-an
afraid-of	1s	*that*	*man*
[+V]	(Nom, +PAT)	[+Det]	(Lcv, +LOC)

I am afraid of that man

(3.7a) ma-talaw kako itira tamdaw-an
afraid-of 1s *that* *man*
[+V] (Nom, +PAT) [+Det] (Lcv, +LOC)
I am afraid of that man

In example 3.7 tira tamdaw-an is analysed as Locative Locus even though it bears the Accusative case form of the demonstrative because (1) the Accusative form is suspiciously similar to the Locative form itira tamdaw-an which is the norm (see example 3.7a) and which is substitutable here with no change in meaning, while the locative noun suffix -an on tira tamdaw-an suggests that the form is a kind of a transition form between the Accusative and Locative markings, (2) statistically it is abnormal to have Accusative with ergative ma- verbs, and (3) the use of this seeming Accusative Locus form is confined to the one educated informant who knows English very well and tends to regularise some Amis structures in accordance with their English counterparts. He has a tendency to use accusative demonstratives interchangeably with locative ones, especially when they are followed by locative nouns with the -an suffix. In the present analysis, I am accepting accusatively-marked forms like tira tamdawan as variants of [Lcv,+LOC] forms such as itira tamdawan (for this informant only) and not setting up a separate CF-CR correspondence, representable as [Acc,+LOC], to account for this marginal phenomenon. For the transition between [Acc,+PAT] and [Lcv,+LOC], refer to Figure 3.1 in section 3.1.3.1 and derivational rule DR-27 in Chapter 6.

The Patient subjects in the following examples correspond to different situational roles and hence different case relations in a Fillmorean analysis.

(3.8) ma-tawa cira
laugh 3s
[+V] (Nom, +PAT)
he is laughing

(3.9) ta-lomaq cira
go-home 3s
[+V] (Nom, +PAT)
he goes home

(3.10) ma-bekac kia wawa
run *child*
[+V] (Nom, +PAT)
the child is running

(3.11) siqnaw kina labi
cold *this* *evening*
[+V] (Nom, +PAT)
it is chilly this evening

(3.12) no lomaq nomako kina sera
family 1s *this* *land*
[Gen] (Nom, +PAT)
my family owns this land
Lit. *this land is my family's*

(3.13) kamay-en ko sapibacaq noniam
hand-ed *means-of-laundering* lexcl
[+V] (Nom, +PAT)
we launder by hand
Lit. *our means of laundering is by hand*

Fillmore would probably have assigned an Experiencer case relation to cira "3s" in example 3.8, an Agent case relation to wawa *child* in example 3.10, a Time case relation to labi *evening* in example 3.11, a Locative case relation to sera *land* in example 3.12, and an Instrument case relation to sapibacaq *means-for-laundering* in example 3.13, because he had not considered the Patient case relation to be fundamental and indispensable in his framework, and instead assigned case relations in accordance with "raw" situational roles.

The lexicase way of assigning case relations in accordance with syntactic criteria is a logical consequence of the claim that Patient is the fundamental case relation. This claim not only captures a generalisation about structural similarity of sentences such as examples 3.8-3.13, it also provides a point of reference for identifying inner and outer (or, immediate and indirect, see Figure 2.8) case relations. With these assigned case relations we can subcategorise verbs by their case frames and account neatly for their derivational interrelationships. The whole verbal system revolves around this basic claim.

3.1.2 Realisation

The Patient case relation can be manifested by the Nominative (Nom) or Accusative (Acc) case forms. Examples of the various realisations of PAT in Amis are given below.

3.1.2.1 Nominative Patient

If [+PAT] occurs by itself, or with non-inherent case relations in a verbal construction, or in any ergative construction, it is always realised in the Nominative case form (Nom). Examples showing [Nom,+PAT] include the following:

(3.14) si-nani kia wawa
have cat *child*
[+V] (Nom, +PAT)
the child has a cat

(3.15) ma-rarid ko tangila nira
become-infected *ear* 3s
[+V] (Nom, +PAT)
his ear is infected

(3.16) taes-en cira
beaten 3s
[+V] (Nom, +PAT)
he was beaten up

(3.17) misa-labi kia babahi
cook-dinner *woman*
[+V] (Nom, +PAT)
the woman is cooking dinner

(3.18) ma-bekac kia wawa
run *child*
[+V] (Nom, +PAT)
the child is running

The following examples show [Nom,+PAT] co-occurring with other actants:

(3.19) ma-bahbah nako kia waco no lakaw
drive-away ls *dog* *stick*
(+V, +ergv) (Gen, +AGT) (Nom, +PAT) (Gen, +INS)
I drive the dog away with a stick
Lit. *the dog drives-away by me with a stick*

(3.20) ma-tawa no taw kia apa
laugh-at *people* *fool*
(+V, +ergv) (Gen, +AGT) (Nom, +PAT)
people laugh at the fool
Lit. *the fool laughs-at by the people*

(3.21) ma-qonqon ni Kolas kako
hurry, urge-on *Kolas* ls
(+V, +ergv) (Gen, +AGT) (Nom, +PAT)
Kolas hurried me
Lit. *I hurried by Kolas*

It must be pointed out that there is a universal tendency in ergative languages for Patient to appear in the nominative case while Instruments and Agents appear in the genitive case (cf. Fillmore 1968:14). Amis, being a mixed language, shows this pattern of correspondence with ergative verbs. The selection of one realisation of a CR over the other depends on the classification of verbs. In Amis, the accusative subclass of verbs choose their subjects according to Fillmore's "Subject Choice Hierarchy" (Fillmore 1968:33), whereas the category of ergative verbs always choose Patient as their grammatical subject. For ergative verbs, an Agent which is not the subject is always realised by the Genitive case form.

3.1.2.2 Accusative Patient

A non-pronominal Patient actant can also take the Accusative (Acc) case form. The Accusative case marker to has an indefinite reading, while the other accusative Determiners are all definite. Note that personal pronouns do not have an Accusative case form in their inflectional paradigm, and so cannot be marked as Accusative Patients. Examples with non-pronominal [Acc,+PAT] are:

(3.22) mi-qosaw to haw kamo to hemay ni Apoy?
save *already* QM 2pl *rice* *Apoy*
(+V, +trns, -ergv) (+Adv, +spct, +prft) (Nom, +AGT) (Acc, +PAT) (Gen, +LOC)
have you saved some rice for Apoy?
Lit. *have you saved some of Apoy's rice?*

(3.23) pa-tireng kami to cacodadan saka i binaolan nia pala
build lexcl *school* *for* *inhabitant* *village*
(+V, +trns, -ergv) (Nom, +AGT) (Acc, +PAT) (+P, Ben) (Loc, +LOC) (Gen, +LOC)
we build a school for the people of the village

(3.24) pa-taini cira to baro saka itakoan
bring 3s *flower* *for* 1s
(+V, +trns) (Nom, +AGT) (Acc, +PAT) (+P, Ben) (Lcv, +LOC)
he brought some flowers for me

When Patient is realised in the Nominative case form, then, it always has a definite reading. When Patient is realised in the Accusative, however, it is to be interpreted as indefinite unless it is otherwise specified by a demonstrative, as in examples 3.25 and 3.26 below:

(3.25) pabeli cira tia codad itakoan
give 3s *book* 1s
(+V, +trns, -ergv) (Nom, +AGT) (Acc, +PAT) (Lcv, +LOC)
she gave the book to me

(3.26) mi-pinaro kami a malkaka tina karireng
load lexcl *be-with-brothers* *this* *cart*
(+V, +trns) (Nom, +AGT) (+V, -fint) (Acc, +PAT)
we brothers load this cart

In order to translate the English sentences in examples 3.22-3.24 with a definite interpretation for the objects, we can substitute a Demonstrative for the article to of to hemay *(some) rice*, to cacodadan *a school*, and to baro *(some) flowers*. The closest substitute would be tia which, like English the, conveys definiteness but is neutral with respect to proximity.

In section 3.4.3.5 below, we will see that, in order to express a definite subject and a definite notional "direct object" in the same sentence, Amis often resorts to anti-passive, zero-derived intransitive verbs with a LOC case relation corresponding to the PAT of their transitive sources. Since personal names and pronouns do not have Accusative forms, they cannot occur as

direct objects of accusative transitive verbs. When the notional object is a personal name or a pronoun, it can only be expressed as the Locus with a derived intransitive verb.

3.1.3 Ramifications

3.1.3.1 Non-specific Object and Accusative Patient

In traditional terms, non-subject Patients are often equated with the notional "direct object". In Amis, such notional direct objects have two different realisations, namely, as Accusative Patient or Locative Locus. Consider the following examples:

(3.27) mi-kilim$_1$ kako to boting
look-for ls *fish*
[+V, +trns, -ergv] [Nom, +AGT] [Acc, +PAT]
I am looking for some/a fish
or, *I am looking for the fish*

(3.28) mi-kilim$_1$ kako tia boting
look-for ls *fish*
[+V, +trns, -ergv] [Nom, +AGT] [Acc, +PAT]
I am looking for the fish

(3.29) mi-kilim$_1$ kako tia tamdaw
look-for ls *the* *man*
[+V, +trns, -ergv] [Nom, +AGT] [Acc, +PAT]
I am looking for the man

(3.30) mi-kilim$_2$ kako tia tamdaw-an
look-for ls *the* *man*
[+V, -trns] [Nom, +PAT] [Lcv?, +LOC]
I am looking for the man

(3.31) mi-kilim$_2$ kako itia tamdaw-an
look-for ls *the* *man*
[+V, -trns] [Nom, +PAT] [Lcv, +LOC]
I am looking for the man

(3.32) mi-kilim$_2$ kako ici Panay-an
look-for ls *Panay*
[+V, -trns] [Nom, +PAT] [Lcv, +LOC]
I am looking for Panay

(3.33) mi-kilim$_2$ kako icira-an
look-for 1s 3s
(+V, -trns) (Nom, +PAT) (Lcv, +LOC)
I am looking for him/her

Could we have an accusative transitive verb in all these examples? It really depends on the assignment of CR's. If the case frame consists of a PAT and an AGT, and if the AGT is the subject, then we have by definition (cf. section 3.2.3.3 and section 5.1 below) an accusative transitive verb. If the notional direct object is treated as a LOC realised in the Locative case form, then we would have an intransitive verb.

On examining the nominal actants in the examples, we find that when the notional object is non-pronominal and non-personal, it is realised in the Accusative case form. When the notional object is a pronoun or a personal name, it would necessarily be realised in the Locative case form, since Amis pronouns and personal names do not have Accusative forms. Bordering between the clean-cut cases are examples 3.30 and 3.31 where the definite non-pronominal, non-personal notional object can be marked by either the Accusative or the Locative case form. In these borderline cases, whether the determiner is in the Acc or Lcv case form, the N's invariably have an -an suffix that formally places them in the category of location nouns. As with itia tamdaw-an in example 3.31, tia tamdaw-an in example 3.30 is analysed as Locative Locus even though the determiner bears the Accusative case form.

The gradual shift from Accusative to Locative marking seems to correspond to a change in some distinctive semantic features, especially the features of definiteness and specificity. Schematically, the gradation can be represented by the feature matrixes in Figure 3.1 below:

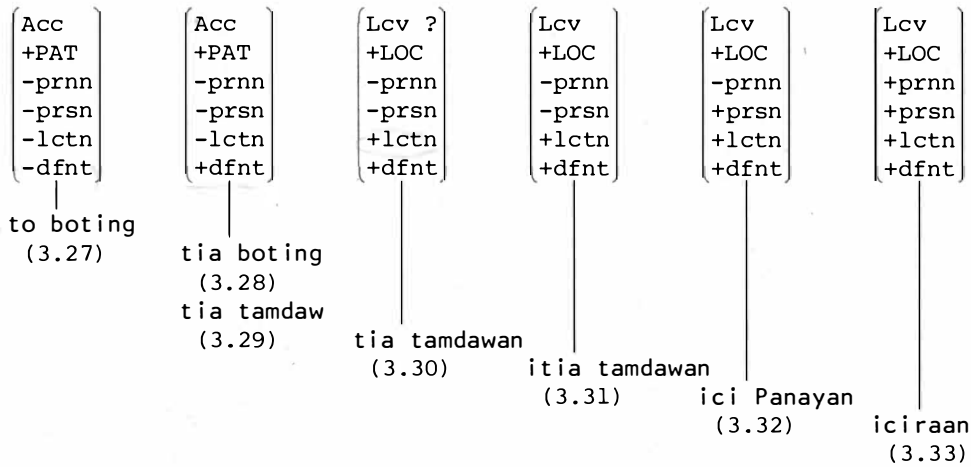


Figure 3.1 Feature Gradation from Accusative PAT to Locative LOC

The gradual shift of meaning takes place one feature at a time, in the direction of greater specificity, with specificity formally defined by the combination of the features [+prnn], [+prsn], [+lctn], and [+dfnt]. The shift from Accusative Patient to Locative Locus then corresponds to a growth in

specificity for the notional object. My use of the term "specific" thus differs from its traditional usage which opposes the notion of "definiteness" with respect to the speaker's assumption of the hearer's knowledge of the referent. It corresponds most closely to the label "individuated" used by Hopper and Thompson (1980:253, 287). Being personal and definite would be more specific than being non-personal and/or indefinite. An Accusative Patient, then, denotes a non-specific object while a Locative Locus denotes a specific object.

We now return to the crucial question of CR-assignment which will determine our analysis of the verb as well. To the notional object realised in the Accusative CF, we assign the CR of PAT. To the notional object realised in the Locative CF, we assign the CR of LOC. In the former case, we have an accusative transitive verb. In the latter case, we have yet to assign the fundamental CR, i.e., PAT, to some actant. Thus, while the notional object is assigned LOC, the notional actor is assigned PAT. The resultant case frame indicates an intransitive verb, possibly an anti-passive, zero-derived intransitive verb with a LOC case relation corresponding to the PAT of its transitive source. Thus, mi-kilim$_1$ in examples 3.27-3.29 is transitive while mi-kilim$_2$ in examples 3.30-3.33 is intransitive. Their respective feature specifications are given below:

mi-kilim$_1$

$$\begin{bmatrix} +V \\ +trns \\ -ergv \\ +[+AGT] \\ +[+PAT] \\ -\begin{pmatrix} Nom \\ -AGT \end{pmatrix} \\ -\begin{pmatrix} Acc \\ -PAT \end{pmatrix} \end{bmatrix}$$

mi-kilim$_2$

$$\begin{bmatrix} +V \\ -trns \\ +[+PAT] \\ +[+LOC] \\ -\begin{pmatrix} Nom \\ -PAT \end{pmatrix} \\ -\begin{pmatrix} Lcv \\ -LOC \end{pmatrix} \end{bmatrix}$$

Their derivational relation is recapitulated in section 6.2.

This analysis possibly invites the criticism that the use of two different CF's and two different CR's to distinguish just two verbs (or two verb classes) is too extravagant. Why can't we keep the CR invariant? We agree that the marking of Accusative Patient and Locative Locus is indeed redundant, but that can easily be taken care of by the redundancy rules below:

RR-1a [+PAT] → [Acc] / [+[+Nom]]

RR-1b [Acc] → [+PAT] / [-INS]

RR-2a [+LOC] → [Lcv] / [+[+Nom]]

RR-2b [Lcv] → [+LOC] / $\begin{pmatrix} -PLC \\ -TIM \end{pmatrix}$

Given the proper environment, we can predict the CR from the CF, or vice versa, depending on whether we have a CR or a CF as input to the redundancy rule. In Amis, non-subject PAT is realised only in the Accusative case form while the Accusative case form realises either a PAT or an INS. Non-subject LOC is realised only in the Locative case form though the Locative case form may realise LOC, PLC, or TIM.

If we chose to adopt the alternative solution to keep the same CR for the two different CF's, we would have to introduce into our system either a Locative Patient or an Accusative Locus, either case being a CF-CR association which is not needed elsewhere. For those that may find the conceptual jump from PAT to LOC, from AGT to PAT, and from transitive to intransitive verb too hard to accept all at once, we must point out once more that, in lexicase, CR's are assigned in accordance with syntactic criteria and not with a supposedly invariant abstract situational notion or role. When an intransitive verb is derived from a transitive verb, or vice versa, the re-assignment of CR's follows naturally from the definition of these verb categories.

3.2 The Agent Case Relation [+AGT]

3.2.1 Characteristics

Fillmore (1968:24) looks upon the referent of an Agent actant as the "typically animate instigator of the action identified by the verb". This view was undisputed by lexicase grammarians until Starosta (1978:12) redefined the Agent in a lexicase grammar as "the non-immediate perceived causer of the action of the verb". This departure from previous lexicase practice stems partly from the realisation that "intention cannot be part of the definition of Agent in a case grammar" (cf. Pleines 1976:105-146 and Starosta 1978:12-13). Since Fillmore's term "instigator" seems to imply intention, it can be misleading. The redefinition of the Agent case relation is also prompted by the consideration that the "typically animate" part of Fillmore's definition is also misleading. First of all, animateness as a semantic characteristic is not restricted to Agent actants. For instance, Patient, as the entity which is viewed as moving or being located in space, can also be animate. Secondly, the Agent need not always be animate. Starosta (1978:16-20) has provided convincing arguments to show that machine and tsunami in the following examples, though inanimate, should be assigned the Agent case relation:

(3.34) This machine polishes the floor with a rotary brush.
[+AGT] [+PAT] [+INS]
(Platt 1971:22)

(3.35) The tsunami inundated Kapiolani Park with a towering
[+AGT] [+PAT]
wall of water.
[+INS]
(Starosta 1978:18)

The analysis of 3.34 and 3.35 is parallel to that of 3.36 below which contains an animate Agent:

(3.36) Mildred swayed her audience with logical arguments.
[+AGT] [+PAT] [+INS]
(Starosta 1978:16)

Hence, Starosta's redefinition of Agent captures generalisations about structural similarities between sentences with animate versus inanimate subjects, generalisations which are otherwise lost through the assignment of different case relations to the subjects of syntactically parallel sentences.

The present semantic definition of Agent is based on the notions of cause and control as discussed in Pleines (1976:83-87) and Starosta (1978:13). In a chain of causation, the perceived primary cause relation is normally coded as the Agent [+AGT], and the perceived terminal cause relation as the Instrument [+INS]. Most languages allow the grammatical encoding of a maximum of two links in the chain, one AGT and one INS, although an occasional intermediate link may appear as Means.

In establishing the presence of an actant in the Agent case relation, several points should be kept in mind. First of all, in the lexicase system, an Agent never occurs alone. It must always co-occur with a Patient, the fundamental case relation. This is the natural consequence of the assumption that every sentence (except for some impersonal or meteorological sentences) must contain at least a Patient. Secondly, besides the Patient, an Agent always implies an Instrument, which is the immediate effective cause in the chain of causation. Thirdly, the Agent must act on something perceived as disassociated from itself. This holds true even for reflexives. The entity affected by the action is the Patient, and although the Patient may not be physically separate from the Agent, the two actants must be conceptually and grammatically separate from each other.

3.2.2 Realisation

The Agent case relation can be realised in either the Nominative (Nom) or the Genitive (Gen) case forms in Amis. Examples are given below.

3.2.2.1 Nominative Agent

Agent actants typically occur with transitive verbs. In traditional terminology, a transitive verb is said to be in the "active voice" if the Agent is the subject, and in the "passive voice" if a non-agent is the subject. This active-passive dichotomy has been disputed for Philippine-type languages such as Tagalog (cf. Cena 1978; DeGuzman 1978:106). For Formosan languages, Starosta (1974:298) finds the distinction useful but restricts it only to the accusative subclass of verbs which choose their subjects according to Fillmore's "Subject Choice Hierarchy" (cf. Fillmore 1968:33). With the accusative transitive subclass of verbs, the Agent is normally realised in the nominative (Nom) case form as in the following examples:

(3.37)

mi-radom	kia	babahi	to	nanom	i	tebom
draw-from		*woman*		*water*		*well*
[+V, +trns, -ergv]		[Nom, +AGT]		[Acc, +PAT]		[Lcv, +LOC]

the woman draws water from the well

(3.38)

mi-ala	kia	wama	tia	nani
get, rescue		*father*		*cat*
[+V, +trns, -ergv]		[Nom, +AGT]		[Acc, +PAT]

the father rescues the cat

(3.39) mi-kilim kako to badal to saka itia babahian
seek ls *berries* *for* *the* *girl, woman*
(+V, +trns) (Nom, +AGT) (Acc, +PAT) (+P, Ben) (Lcv, +LOC)
I'm looking for berries for the girl

(3.40) mi-ai cira itakoan to boting
ask-for 3s ls *fish*
(+V, +trns, -ergv, +sorc) (Nom, +AGT) (Lcv, +LOC) (Acc, +PAT)
he asked me for the fish

3.2.2.2 Genitive Agent

An Agent which is not subject is always realised in the Genitive (Gen) case form. As will be shown in section 5.1.3.2 below, Amis, being a mixed ergative and accusative language, turns out to have two subclasses of verbs that can be called ergative transitive which take genitive agent and nominative patient. The verb can be either a ma- ergative transitive (as in examples 3.41-3.43) or the -en "passive voice" of an accusative transitive verb (as in examples 3.44-3.45).

With ergative verbs, Patient is always chosen as the grammatical subject. The following examples show genitive Agent and Patient subject with the ma- ergative transitive verbs. Included are sentences from Starosta's Amis data, his item number given in parentheses.

(3.41) ma-radom ko nanom i tebom nira babahi
draw-from *water* *well* *that* *woman*
(+V, +trns, +ergv) (Nom, +PAT) (Lcv, +LOC) (Gen, +AGT)
that woman draws the water from a well
Lit. *the water draws from a well by that woman*

(3.42) ma-ala kia nani nia wama
rescue *the* *cat* *the* *father*
(+V, +trns, +ergv) (Nom, +PAT) (Gen, +AGT)
the father rescued the cat
Lit. *the cat rescued by the father*

(3.43) ma-melaw nomako kiso i nasani (M171)
see ls 2s *just-a-while-ago*
(+V, +trns, +ergv) (Gen, +AGT) (Nom, +PAT) (Lcv, +TIM)
I just saw you
Lit. *you just saw by me*

The -en verbs are also syntactically ergative. Thus they also require their Agents to appear in the genitive case form in Amis, as in the following examples:

(3.44) sawad-en to nira ko hali-qepah-ay a kakawaw
abandon *already* 3s *drinking-much* *habit*
[+V +trns +ergv] [+Adv +spct] [Gen +AGT] [Nom +PAT]
he has given up drinking
Lit. *the drinking habit has (been) abandoned by him*

(3.45) melaw-en no wawa ko tomay (M126)
take-care-of *child* *bear*
[+V +trns +ergv] [Gen +AGT] [Nom +PAT]
the child took care of the bear
Lit. *the bear took care of by the child*

While these verbs allow [+AGT] in their case frame, they are by definition transitive (see section 3.2.3.3 below). At the same time, since both the ma- verbs and the -en verbs are transitive verb classes which require PAT subjects rather than AGT subjects, both classes are by definition ergative (cf. Starosta 1974:297).

3.2.3 Ramifications

Related to the Agent case relation, there are three interesting issues that deserve further discussion. First, there is the issue of genitive agent and possessor. The fact that the two are similar in form has often raised doubts about the status of the construction head, whether it should be analysed as a V (with genitive agent) or as a N (with a possessor). Secondly, there is the problem of adding an Agent to the case frame of derived causative verbs. If the source verb already has an Agent, how can another Agent be introduced without violating the 1/Sent constraint? Thirdly, there is the issue of transitivity. Traditionally, transitive verbs are identified by the presence of direct objects. In the most recent conception of the lexicase model, transitivity corresponds to the presence of Agent and/or Instrument in the case frame of the verb. We shall explore these issues in the following sections.

3.2.3.1 Genitive Agent versus Possessor

A genitive agent and a possessor, being similar in form, are easily confused. When they are confused, the correct identification of the construction head is also affected. If a form is identified as a possessor, then it is part of an NP with a nominal head. If a form is identified as a genitive agent, it is then part of the case frame of the verb which is the head of the construction. As a sister constituent, the form plays a role in subclassifying verbs. Hence, the confusion can make a big difference in our understanding of the sentence, both syntactically and semantically.

In the following we will show how a reference to word order and pronouns in Amis can help determine whether the Gen is a possessor of the subject or not.

The position of a non-subject Agent, whether or not it is a pronoun, may give rise to ambiguity. Example 3.46b and 3.46c each have two readings because both non-subject Agents and nominal possessors are marked by the same Genitive form in Amis. This phenomenon is said to be a common feature of ergative syntax, shared by Amis and many other Philippine-type languages (cf. Pawley and Reid 1978:56).

(3.46a) taes-en nia tamdaw ko wawa
beat *the* *man* *child*
[+V, +trns, +ergv] [Gen, +AGT] [Nom, +PAT]
the man beat the child

(3.46b) taes-en ko wawa nia tamdaw
beat *child* *man*
[+V, +trns, +ergv] [Nom, +PAT] [Gen, +AGT/+LOC]
the man beat the child
or, *the man's child got beaten*

(3.46c) taes-en ko wawa nira
beat *child* 3s
[+V, +trns, +ergv] [Nom, +PAT] [Gen, +AGT/+LOC]
he beat the child
or, *his child got beaten*

Having experimented with various word sequences, we find that ambiquity arises only when a non-genitive non-pronominal NP is immediately followed by a genitive NP. No ambiquity would arise if the non-genitive NP immediately preceding a genitive NP is a pronoun, due to the co-occurrence restriction that no nominal possessor may occur within the same constituent after a pronoun. Example 3.46b would no longer be ambiguous if we substitute the third person singular pronoun cira for ko wawa *the child* as in example 3.46d below:

(3.46d) taes-en cira nia tamdaw
beat 3s *the* *man*
[+ergv, +trns] [Nom, +PAT] [Gen, +AGT]
the man beat him

Sentence 3.46d has only one interpretation. The nominal possessor interpretation of the genitive form is ruled out by the co-occurrence restriction which can be stated by the following redundancy rule:

(3.47) [+prnn] → [- __ [+N]]

This rule says that a pronoun is never followed by another N within the same NP constituent. Therefore, a possessor which is coded as [Gen,+LOC] in this study never occurs immediately after a pronoun. A Gen form in that position would have to be analysed as [Gen,+AGT] as in example 3.46d.

Another way to disambiguate sentences like 3.46b and 3.46c is to reverse the word order of the two nominal constituents. When the genitive NP, whether or not it is a pronoun, come immediately after the verb, it is no longer confused with the nominal possessor and receives a unique interpretation as a non-subject Agent. Example 3.46e, as well as 3.46a above, shows the unambiguous pattern:

(3.46e) taes-en nira ko wawa
beat 3s *child*
[+V, +trns, +ergv] [Gen, +AGT] [Nom, +PAT]
he beat the child

However, due to the similarity in morphological shape, derivationally related -en-suffixed nouns and verbs in Austronesian languages are often difficult to distinguish (cf. Starosta, Pawley, and Reid 1982). When these forms are followed by a Gen, it is sometimes difficult to tell whether the Gen form is a possessor or an Agent. In such cases, the presence of a Gen form is of no use in determining the nominal or verbal status of a preceding form. In the present analysis of Amis, I have relied on the presence or absence of a Determiner on the predicate word to determine the respective nounhood or verbhood of a constituent.

As for the question of whether or not the pre-subject Gen forms in examples 3.46a and 3.46e are possessors, then, the decision depends on the grammatical categorisation of the head of the predicate constituent. If it is a Verb, then the Gen form is unmistakably not a possessor. If it is a concrete Noun, marked by either a Neutral (o or ci) or a Locative (i) case marker, then the Gen form that immediately follows it is undoubtedly an attribute of the nominal predicate. The status of a Gen form is still in doubt when the head is a deverbal Noun, such as sa-pi-angang *means for calling people* cited in section 3.3.2.1 or the English gerund like shooting and cooking. I would be inclined to label the Gen form as a possessor [+LOC] if the derived N has already acquired a somewhat concrete and lexicalised meaning, as with English words like meaning, landing, covering, binding and frosting. Otherwise, if the derivation still seems fresh with the verbal meaning prominent and regularly predictable, the CR of the Gen form corresponds to the subject of the source verb from which its nominal constituent head has been derived. Depending on the verb, the choice of CR to match the Gen form in such "embedded" clauses follows Fillmore's Subject Choice Hierarchy. If the source verb is transitive, with [+AGT] in its case frame, then the Gen form following the deverbal noun is, at least in this analysis, treated as a genitive agent and not a possessor on the derived noun, be it subject or predicate of the sentence.

3.2.3.2 Agent in Causative Constructions

A derived causative verb calls for an additional actant in its case frame. The additional actant is sometimes marked with a "causer" case relation by Stevens (1973) and other case grammarians. In lexicase, this additional actant is none other than the perceived primary causal relation, that is the Agent (cf. Starosta 1978:12-17, 40-42).

The lexicase claim that the "causer" in a causative construction is an Agent is supported by Formosan languages (cf. Starosta 1974) whose indirect causation constructions conform generally to the pattern in Figure 3.2 for Austronesian languages. In Amis, the Agent of an ergative transitive verb always appears in the Genitive case form, and so does the "causer" of an ergative causative verb. The simplest explanation for this observation is to analyse the "causer" as a grammatical Agent.

However, a grammatical conflict arises when a morphological causative verb is derived from a transitive verb which requires an Agent actant, and when this derived causative verb requires an additional "causer" actant that is also an Agent. How, then, can a case frame accommodate this additional Agent NP without violating the One-per-Sent constraint? Starosta resolves this conflict by reassigning the "original" Agent of the non-causative source verb to another case relation, formerly called the Experiencer. To use the general pattern presented by Stevens for Austronesian "indirect action causative" construction, we can illustrate the difference between Stevens' and Starosta's case assignment in Figure 3.2 below:

Stevens	[causer]	[agent]	[object]	[other case relation]
Starosta	[+AGT]	[+EXP]	[+PAT]	[other case relation]

Figure 3.2 Case Assignment for Indirect Causation Construction (cf. Starosta 1974:285)

Starosta's analysis allows the capturing of important generalisations about verbal derivation and the mapping of CR's onto CF's. In the present study of Amis such structures have been analysed somewhat differently (see section 5.1.3.5), but the adding of an Agent in the derivation of causative verbs is still simple and straightforward.

3.2.3.3 Transitivity

While Fillmore does not subclassify verbs in terms of transitives or intransitives, Pranee Kullavanijaya, in her study of Thai accusative transitive verbs (1974) recognises transitive verbs as constituting an explicit lexical category with two identifying case features. A transitive verb in Thai requires in its fully specified matrix the features [+([+NM])] and [-[+NM,+OBJ]]. The first feature means that a transitive verb in Thai "is required to have potential for a nominative actant, that is, a grammatical subject, in its environment" (ibid.:106). The second feature means that a transitive verb does not allow an OBJ subject, that is, the co-occurrence of an actant in nominative objective case (i.e., Nominative Patient in the present study).

Kullavanijaya's definition for transitive verbs has gone a step beyond Fillmore's specification by the case frame: +[__O(I)(A)] for an English verb like open (Fillmore 1968:27) in that lexicase case form features and their association with case relation features are brought into play as well in the characterisation of verb classes. This reference to case form features makes the definition more precise than traditional definition of transitive verbs in

terms of the presence of an object, a noun occurring immediately after the verb without any intervening preposition (Jespersen 1969:116) and even Chomsky's definition with the Strict Subcategorisation feature: [+__NP] for the English verbs eat, grow, and believe (Chomsky 1965:94), since it restricts the CR's and CF's of the NP in addition to requiring its presence.

We should recall that according to Kullavanijaya's definition of transitivity, which has been assumed by all subsequent lexicase descriptions, all intransitive verbs have Patient subject (if there is a subject) while transitive verbs have non-Patient subjects. However, Kullavanijaya's definition is applicable only to accusative languages. By her definition, all ergative verbs would be intransitive, since the lexicase definition requires ergative verbs to have Patient subjects (Starosta 1974:297). However, it now appears that the notion of transitivity is relevant to ergative languages as well as accusative ones (cf. Hopper and Thompson 1980). The definition of transitivity I would like to propose thus extends over ergative languages as well as accusative ones.

In the present study, transitive verbs in Amis are defined in terms of the case frame features: [+[+PAT]] with [{+[+INS],+[+AGT]}], while intransitive verbs are defined with the features [-[+INS]] and [-[+AGT]]. What this means is that transitive verbs require the co-occurrence of [+INS], [+AGT], or both, while intransitive verbs exclude their co-occurrence. This definition applies to both ergative and accusative verbs and Kullavanijaya's definition follows as a special case limited to accusative languages. In Figure 5.2 of section 5.1.2 below, transitive verbs are cross-classified with the feature of ergativity, yielding three subclasses of ergative transitive verbs (IIIb, IVb, and Vb) and two subclasses of accusative transitive verbs (IIIa and Va) for Amis.

This treatment disallows the optionality of "inner" cases that Fillmore permits in his case frames, such as +[__O(I)(A)] mentioned above for open. Within the lexicase framework, a change in basic case frame features entails the derivation into another verbal category, so that open in He opened the door. belongs to a separate class from open in The door opened. on account of their difference in case frame. Instead of deriving transitive and intransitive open from a deep structure containing an identical verb entry (cf. Fillmore 1970:387, Cook 1971:16-24), the relationship between these two homophonous verbs is accounted for in lexicase by means of Derivation Rules (see section 2.2.2.3). The definition given in this study leads to the recognition of homophonous verbs as belonging to different verb classes, among them transitive and intransitive verbs, characterised by the array of obligatory CR's in the case frame and by subject choice from among these CR's. Thus lexicase explicitly rejects the assumption of the "unity of the word" which underlies the treatment of such words in, for example, Fillmore's and Anderson's case grammar frameworks as well as generative semantics.

In some cases, then, derivationally related verbs involving apparently similar situational roles but implying different perspectives of the same situation may have quite different case frames and syntactic properties. That is, based on the syntactic criteria afforded by the difference in realisation, lexicase, unlike Fillmorean case models, may assign one combination of case features to one verb and a different combination to the other related verb. A Derivation Rule will be used to account for the relatedness of the verb classes involved and the reassignment of case relations and subject choice in the case frames of these verbs. This license to reassign case relations in the lexicase model provides new insight into the relationship between transitive and intransitive verbs. For details of syntactic derivation of Amis verbs, see Chapter 6.

3.3 The Instrument Case Relation [+INS]

3.3.1 Characteristics

The Instrument case relation here is extended to cover the notions of Instrument, Means, and Manner. It is broadened to mean any immediate and intermediate cause of an action instead of just the most immediate effective cause as suggested by Starosta (1978 and to appear a).

It is pointed out by Starosta in *The Faces of Case* (Starosta 1973:3) that there is a general tendency in natural languages for certain case relations or case-like notions to be realised by the same case forms and that the falling together of these case relations is not to be dismissed as merely accidental. In fact, the mappings of case relations onto case forms exhibit such similar patterns cross-linguistically that it is not all too hasty to claim that they are natural to the point of being language universal. In the present analysis, the natural grouping of Instrument, Means, and Manner is explained as a consequence of the fact that all three notions reflect a single common case relation.

Now let us characterise the notions of Instrument, Means, and Manner before we show in the next section how the Amis language never crowds the case frame with more than one of these three notions expressed at one time. What this means is that there is no danger of violating the 1/Sent constraint even if we put these notions under the same label.

According to Starosta, the presyntactic notion of Instrument designates the entity perceived as the immediate effective cause of the action or event referred to by the verb, whereas Agent is perceived as an indirect cause in the chain of causation. Occasionally, an intermediate cause is involved and it is referred to as the Means. In terms of the cause and control relations, we can say that an Agent necessarily implies the conceptual presence of an Instrument or a Means, but not vice versa (cf. Starosta 1978:13-14).

In a lexicase analysis, an Instrument may be animate or inanimate, concrete or abstract. The a priori assumption of most versions of case grammar that animateness is involved in the differentiation of the Agent from the Instrument has been found to be syntactically unmotivated (cf. Pleines 1976: 18-32; Starosta 1978:7,13-14). Therefore, Fillmore's original definition of Instrument as "the immediate physical cause of an event" (Fillmore 1970:116) has been extended in lexicase to cover animate and abstract instruments as well (Starosta 1978:487). Besides, as shown in the previous two sections of this chapter, the traditional notion of instrument can sometimes be assigned the [+PAT] or [+AGT] case relation instead of [+INS], depending on the syntactic pattern of the sentence. That is to say, a notional instrument is not always matched up with the Instrument case relation. The ultimate decision of case assignment is made primarily on the basis of syntactic criteria. Our practice here is simply one that does not allow situational semantics to interfere with syntactic considerations.

The presyntactic notion of Means is defined by Starosta as the "trajectory of the action impinging on the PAT" (Starosta MS c:1). In the chain of causation, the Means designates an intermediate cause, between Agent and Instrument. Consider the following English examples:

(3.48a) John loaded the hay onto the truck.
AGT PAT LOC

(3.48b) John loaded the truck with hay.
AGT PAT MNS

(3.49a) Bees were swarming in the garden.
PAT LOC

(3.49b) The garden was swarming with bees.
PAT MNS

(3.50) John loaded the truck with hay with a pitch fork.
AGT PAT MNS INS

(3.51) He opened the door with a key with his left hand.
AGT PAT INS MNS

In dealing with related sentences such as 3.48a and 3.48b, and 3.49a and 3.49b, Starosta proposed the addition of the notion of Means to the metatheory. For English at least, a separate MNS case relation is necessary in addition to INS to account for sentences such as examples 3.50 and 3.51. Since the two constituents, say, key and his left hand, are not co-referential, we would have violated the 1/Sent constraint had we decided to analyse them as having the same case relation. The subtle distinction between the immediate and the intermediate cause of an action, however, may not be reflected in the case system of every language.

The presyntactic notion of Manner designates "the manner in which an action is performed" (Starosta to appear a:1). In English, this notion can be either expressed by manner adverbials or by prepositional phrases with the preposition with as in the following examples:

(3.52a) He packed the suitcase carefully.
$\begin{pmatrix}+\text{Adv}\\+\text{mnnr}\end{pmatrix}$

(3.52b) He packed the suitcase with care.
MAN

(3.53a) He responded enthusiastically.
$\begin{pmatrix}+\text{Adv}\\+\text{mnnr}\end{pmatrix}$

(3.53b) He responded with enthusiasm.
MAN

Again, not all languages behave like English. In Amis, the notion of Manner is expressed through verbal device instead of by the case system. In other words, Manner is never realised as a nominal constituent and hence never crowds the case frame with Instrument or Means in Amis. Its realisation by a class of manner verbs and verbal complements will be presented in section 3.7.1 below.

We have seen that in English the realisations of Instrument, Means, and Manner are similar, viz., they can all be marked by the preposition with. So is the realisation of the notion of Concomitant (or Comitative). In *The Faces of Case* (Starosta 1973:3-4), Starosta maintains that the possibility of realising COM, INS, and MAN by the instrumental case form is actually much more widely attested than the languages covered in his study — English, German, and Sora —

would suggest. What this means is that COM, INS, MAN, and possibly MNS, form a natural class by virtue of their similarity in surface manifestation as well as in semantic interpretation. This assumption offers a very good vantage point for syntactic patterning. While synchronically it may lead to an optimal case system with the least number of case relations required, operating with the assumption of natural classes of relational notions may also provide new insight into language typology and subgrouping when alternative patterns are manifested by other sets of languages.

3.3.2 Realisation

Like the Agent case relation, the Instrument case relation in Amis can be realised in the Nominative (Nom) or the Genitive (Gen) case form. It can also be realised in the Accusative (Acc) case form with a "Means" reading. Examples are given below.

3.3.2.1 Nominative Instrument

When the Instrument is the subject of a sentence, co-occurring [+AGT] is to be realised in the Genitive (Gen) case form and [+PAT] in the Accusative (Acc) case form. Examples are:

(3.54) sa-pa-ahcid ko cilaq to tood
used-for-making-something-salt *salt* *things*
[+V] (Nom, +INS) (Acc, +PAT)
salt is used for making things salty
or, *salt is used for salting things*

(3.55) mami-asik cira to adawang no cacodadan
assigned-to-sweep 3s *front* *school*
[+V] (Nom, +INS) (Acc, +PAT)
he is assigned to sweep the front of the school

(3.56) sa-pi-angang nomako kina piqio to tamdaw
used-for-calling 1s *this* *whistle* *people*
[+V] (Gen, +AGT) (Nom, +INS) (Acc, +PAT)
I use this whistle to call people

Although the verbs in examples 3.54-3.56 have instrumental subjects, it would be somewhat misleading to label them "Instrument Focus" in the Philippine sense because they do not form a paradigm, and are not marked by any consistent IF affix. The verb forms with sa-pa- and sa-pi- prefixes are secondary forms based on the reanalysis of deverbal sa- nouns, while mami- possibly results from ma-mi- or maN-pi-, also secondary developments. We will discuss our choice between analysing mami- as ma-mi- or as maN-pi below. Morphologically speaking, these forms are too irregular and sporadic to justify the positing of a consistent IF form. These forms would have to be individually marked in the lexicon as verbs that take Nominative Instrument, either as the result of historical accident or as the spearhead of an incipient syntactic change.

To avoid setting up a special class of Nominative Instrument verbs, one might propose as an alternative analysis that the PAT's marked by to in examples 3.54-3.56 could be some other case relation, say, REF, instead of PAT, especially with the ergative-looking verb with mami- in example 3.55. This would then make it possible for the subjects to be marked as Patient of ordinary ergative verbal constructions.

I have decided against the REF analysis because (1) these mami- verbs are not members of the ergative ma- class (cf. the discussion of a ma-mi- versus maN-pi- analysis below); (2) REF case relation is otherwise subsumed under the PLC case relation and is always manifested by saka i, a composite marker consisting of the preposition saka and the locative determiner i, and not by the accusative marker to; (3) the to forms in these examples are all indefinite, which is in accord with the characteristics of Accusative Patient as described in section 3.1.3.2; and (4) REF is an optional outer CR but the actants introduced by to are obligatory and must be included in the case frame for subcategorising sa-pi-, sa-pa and mami- verbs. The alternative analysis of these actants as REF's would make them peripheral and hence not relevant to subcategorisation. Therefore, the actants marked by to are assigned Accusative Patient case features as indicated in the examples.

As to whether mami- comes from ma-mi- or maN-pi-, my considerations are as follows: (1) since there are accusative transitive verbs marked by mi-, such as mi-asik *to sweep (something)* in Amis, they provide the derivational sources for the mami verbs which are also accusative. A verb like mami-asik would then be derived from mi-asik by adding the ergative ma- prefix. The problem here is twofold. First, neither the source not the derived forms are ergative, why should an ergative prefix appear in this context? In other words, the derived verb is not a non-intentional ergative, as it should be if it had been derived by ma- prefixation. Secondly, if we analyse mi-asik as a finite inflected form, it cannot be rederived because derivation almost always applies to stems, not inflected forms. And our present consideration is to treat the mi- verbs as morphologically m-pi- verbs, with basic pi- stems. The stem form of mi-asik is then pi-asik, and it is the latter form that should participate in further derivation. Since it is the pi- form corresponding to mi- verbs that should appear in derived verbs, we anticipate *ma-pi-asik, not ma-mi-asik. (2) If we suggest that mami-asik results from maN-pi-asik instead, with the N-p sequence regularly realised as m, we may have side-stepped the issue of ergativity and, at the same time, allowed the pi- form instead of the inflected mi- form to be further derived. However, we run into other problems with this analysis. First, we are assuming nasal assimilation with N-pi as well as m-pi- when we make the claim that pi- is the basic form, but nasal assimilation is not an active morphophonemic process in this language (cf. section 1.4). In other words, the nasal assimilation analysis is not supported by synchronic phonology. Secondly, comparing Amis with other Austronesian languages, especially languages in the Philippines such as Tagalog and Ilokano, we find that the proposed maN- forms do not correspond in meaning, specifically in their instrumental usage, with similar forms found in other languages. Thirdly, as will be shown in section 5.1, the correspondence between mi- and pi- forms can be accounted for by derivation instead of by inflection, thus allowing mi- forms to be rederived; that is to say, making a ma-mi- analysis possible.

Neither the ma-mi- nor the maN-pi- solution seem to be totally satisfactory. So for the time being we will leave the issue open and simply cite mami- as a single derivational unit as in example 3.55 above.

The verb in example 3.54, sa-pa-ahcid, is derived from a derived causative transitive verb stem pa-ahcid *to make (something) salty*. The basic form ahcid *to be salty* is a stative intransitive verb that takes a [+PAT] subject. Such derivational relations are accounted for in Chapter 6. Example 3.54, without the problematic presence of a non-subject Agent as in example 3.56, lends itself readily to supporting a verbal instead of a nominal interpretation of the sa- forms in these examples, since the position of the Patient actant, to tood *things*, to the right of the subject would make it impossible to assign a binary equational constituent structure if we were to analyse sa-pa-ahcid as a nominalised form instead.

The verb in example 3.56, sa-pi-angang, belongs to a class of verbs derived from transitive verbs like pi-angang *to call (someone)* with AGT, PAT, and INS in their case frames. In this example, the appearance of INS instead of AGT as the subject of the sentence is a violation of Fillmore's Subject Choice Hierarchy for accusative languages. The alternative analysis, which might be proposed to avoid this consequence, would be to treat sa-pi-angang here as a derived nominal predicate of a non-verbal, equational construction, with nomako reanalysed as a possessive pronoun marked as [Gen,+LOC]. This must be ruled out, however, in view of (1) the absence of a Determiner such as o before the alleged nominalised predicate form, and (2) the position of the Patient actant to tamdaw, which, like to tood in example 3.54, would make it impossible to assign the binary constituent structure which is required if the sentence is to be analysed as equational. Though a homophonous nominalised form does exist for each member of the verb class to which sa-pi-angang belongs (cf. section 3.3.3.2), example 3.56 is formally a verbal construction.

It is to be emphasised here that both the mami- and sa-pi- forms cited in these examples can be used as Nouns as well as Verbs, the two categories being derivationally related. Moreover, mami- and sa-pi- verbs are similar syntactically and semantically in many ways. Their distribution, however, is complementary with respect to the features of animateness and humanness marked on the [+INS] actant. While a sa-pi- verb takes a non-human (mostly inanimate) instrument subject, a mami- verb invariably takes an animate (mostly human) one. I have assigned an INS case relation to the animate subject cira of mami-asik in example 3.55, rather than an AGT case relation because, first of all, the structural parallels between mami- and sa-pi- constructions should not be ignored lest we would lose some generalisations. Secondly, both the mami- and sa-pi- verbs, as cited in these examples, indicate that the Instrument is habitually used for the stated purpose. Thirdly, AGT need no longer be associated exclusively with animateness and INS exclusively with inanimateness (cf. section 3.2 above).

The same complementarity exists with mami- and sa-pi- verbs in other syntactic classes. In the following examples which show identical case frames for ergative transitive mami- and sa-pi- verbs, the slight overlap in the selectional restrictions for these verbs makes it possible for a non-human but animate noun like waco *dog* to co-occur with both types of verbs as the following examples will show.

(3.57a) sa-pi-adop kina koang no lomaq ako
used-for-hunting this gun family ls
[+V] [Nom, +PAT, -anmt, -humn] [Gen, +AGT]
my family uses this gun for hunting
Lit. *this gun is used for hunting by my family*

(3.57b) sa-pi-adop kina waco no lomaq ako
used-for-hunting this dog family ls
[+V] [Nom, +PAT, +anmt, -humn] [Gen, +AGT]
my family uses this dog for hunting
Lit. *this dog is used for hunting by my family*

(3.58a) mami-adop kina tamdaw no lomaq ako
assigned-to-hunt this man family ls
[+V] [Nom, +PAT, +anmt, +humn] [Gen, +AGT]
my family assigns this man to hunt
Lit. *this man is assigned to hunt by my family*

(3.58b) mami-adop kina waco no lomaq ako
assigned-to-hunt this dog family ls
[+V] [Nom, +PAT, +anmt, -humn] [Gen, +AGT]
my family assigns this dog to hunt
Lit. *this dog is assigned to hunt by my family*

The selectional requirement of these verbs apparently carries over from their derivational sources as deverbal nouns in equational sentences (see section 6.2.7); that is, a sa-pi-V noun is lexically non-human (the thing used to pi-V) and a mami-V noun is human (one who pi-V's). When a non-human sa-pi-V noun is the predicate of an equational sentence, it is equated with a non-human subject, and a human mami-V noun is similarly equated with a human subject. When these predicate nominals are reanalysed as verbs (cf. Starosta, Pawley, and Reid 1982), these selectional restrictions on subjects carry over in derivation.

3.3.2.2 Genitive Instrument

When [+INS] is not the subject of a sentence, it is usually realised in the genitive (Gen) case form. Examples below include sentence M147 from Starosta's data, his item number again indicated in parentheses:

(3.59) ma-asek no betili cira
strike *lightning* 3s
(+V, +ergv) (Gen, +INS) (Nom, +PAT)
he was struck by lightning
Lit. *he struck by lightning*

(3.60) ma-nanoang ko kilang no bali (M147)
move, wave *tree* *wind*
(+V, +ergv) (Nom, +PAT) (Gen, +INS)
the tree is moving in the wind
Lit. *the tree is moving by the wind*

(3.61) ma-bahbah kia waco no lakaw nia tamdaw
drive-away the dog *stick* *man*
(+V, +ergv) (Nom, +PAT) (Gen, +INS) (Gen, +AGT)
the man drove the dog away with a stick
or, *the man's stick drove the dog away*
Lit. *the dog drove away by the man with a stick*

Both [+INS] actants in examples 3.59 and 3.60 would, by Pleines' defining criterion of "independent action" (cf. Pleines 1976:98), be treated as active "Forces" and hence Agents. Our treatment of lightning, wind, earthquake, rain, tsunami, etc. in this context differs from his in that we regard as criterial "the immediacy of the effective cause rather than its independence" (Starosta 1978:17). Thus both betili *lightning* and bali *wind* in these examples are Instruments, since each of them acts immediately on the Patient in bringing about the effect of the action. The analysis of Forces as grammatically Instruments instead of Agents is both compatible with Fillmore's treatment of natural forces (cf. Fillmore 1971:44) and consistent with the lexicase interpretation of Agent as being viewed as remote from an action and acting indirectly through some intermediary (see section 3.2). These are, however, only semantic reasons. Without syntactic reasons to support it, the argument here would be somewhat weak and arbitrary. Since immediacy is relative to the situation, it is hard to draw a clear line between Agent and Instrument when only one actant is present, especially when animateness is found to be irrelevant to such considerations. Fortunately, in sentences like example 3.61 both an immediate and a non-immediate cause are present, thus enabling us to claim the existence of a Genitive Instrument.

Sentence 3.61 is ambiguous. Due to the rather free ordering of nominal constituents in Amis verbal constructions, nia tamdaw can be interpreted either as a Genitive Agent or as the possessor of lakaw. Sentence 3.61a is the unambiguous counterpart of 3.61, with nia tamdaw coming immediately after the verb and marked as Genitive Agent.

(3.61a) ma-bahbah nia tamdaw kia waco no lakaw
drive-away *man* *dog* *stick*
(+V, +ergv) (Gen, +AGT) (Nom, +PAT) (Gen, +INS)
the man drove the dog away with a stick

It has been pointed out by Pawley and Reid (1978:56) that Philippine-type languages are prone to this kind of ambiguity because of their rather free ordering of sentence constituents, the head-attribute order in NP's, and the

sharing of the genitive form by both a non-subject Agent and a possessor. To avoid such ambiguity, most Philippine-type languages resort to a favoured word order which, as in example 3.61a, places the Genitive Agent immediately after the verb, thus making it less likely to be interpreted as a possessor. However, placing a genitive form immediately after the verb may give rise to another kind of problem, one which suggests the reinterpretation of the verb form as a noun. In section 3.3.2.1 above we have already encountered verbal constructions that resemble equational constructions. The similarity between, say, sa-pi- verbs and sa-pi- nouns is explained by Starosta, Pawley, and Reid (1982) as the result of the reinterpretation of nominalised predicates of cleft sentences as verbs in the course of the evolution of focus systems in Philippine-type languages.

Although "focused" verbs were derived from Proto-Austronesian nominals with various derivational affixes in such a way, the nominal sources are retained as well, resulting in verb forms which are homophonous with and often indistinguishable from their source nouns. This particular ambiguity does not arise in Amis, however, since in my analysis nominal predicates are necessarily preceded by Neutral or Locative determiners while verbal predicates are never preceded by determiners.

3.3.2.3 Accusative Instrument

The presyntactic notion of Means is realised in the Accusative case form in Amis. Since what can be characterised as Means never co-occurs with a notional Instrument as nominal constituents together within the same sentence, we take advantage of this complementarity and extend our INS case relation to cover Means. As a result of this reanalysis, Means is marked as Accusative Instrument as in the examples below.

(3.62) tomes-en noniam a [mi-pinaro] kina karireng to rarami
make-full lexcl *fill* *this cart* *straw*
[+V] (Gen, +AGT) (+V, -fint) (Nom, +PAT) (Acc, +INS)
we filled the cart with straw

(3.63) tomes-en nomako [ko ni-pinaro [tina sinatowik] [to simal]]
make-full lexcl *filling* *this bottle* *oil*
[+V] (Gen, +AGT) (Nom, +PAT, +past) (Acc, +PAT) (Acc, +INS)
I filled the bottle with oil

Examples 3.62 and 3.63 are different in structure, but both of them require an Accusative Instrument to indicate the intermediate cause of the filling act. The second occurrence of PAT in example 3.63 is the result of derivation, with the deverbal noun nipinaro *filling* carrying with it a PAT and an INS from the verbal source. The initial n- prefix in nipinaro signals that the act of filling is completed in the past.

The following example shows a related structure in which the notion of Means is not expressed as Accusative Instrument, possibly as a result of centralisation, i.e., reanalysis of Means as a grammatical Patient.

(3.64) tomes-en noniam [ko ni-pinaro [to rarami] [i tina kelakelaq]]
make-full lexcl *filling* *straw* *this ox-cart*
[+V] (Gen +AGT) (Nom +PAT +past) (Acc +PAT) (Lcv +LOC)
we load the straw onto this ox-cart

The derivation process of centralisation, as seen in this example, does more than a reanalysis of case relations. The constituent assigned the PAT case relation has become the target of an action, being affected by the action as a "transported object", the entity moved through space, rather than simply participating as an indirect cause of it. We shall return to this point in Chapter 6.

Note also that in these examples, the head of the construction is a resultative verb tomes-en *make-full* indicating the result of filling. Our analysis also holds true for sentences in which no result or extent of accomplishment is expressed, as in the following example:

(3.65) pinaro-i to bingkes kina koakoq nomiso
fill *tobacco* *this* *pipe* 2s
(+V +mprt) (Acc +INS) (Nom +PAT)
put some tobacco in your pipe!

In this sentence the extent of filling is not expressed. The Agent subject is understood because the verb is imperative. Other examples of Accusative Instruments given below can easily be accounted for by the analysis presented above — 3.66 and 3.67 with Accusative Instrument like examples 3.62 and 3.65, and 3.68 and 3.69 with a derived noun and hence two apparent PAT's as in examples 3.63 and 3.64 — and they are included only as a treat for data-philes.

(3.66) tomes-en nomako kina saqtian to coco no rarapa
make-full lexcl *this cup* *milk* *cow*
[+V] (Gen +AGT) (Nom +PAT) (Acc +INS)
I filled this cup with milk

(3.67) a [tomes-en noniam kina koiti to raraq]
make-full lexcl *this* *sack* *beans*
(+V +futr) (+V +fint) (Gen +AGT) (Nom +PAT) (Acc +INS)
we are going to fill this sack with beans

(3.68) tomes-en nomako a [mi-pinaro] to simal kina sinatowik
make-full lexcl *fill, put-in* *oil* *this bottle*
[+V] (Gen +AGT) (+V -fint) (Acc +INS) (Nom +PAT)
we filled this bottle with oil

(3.69) hacoa ko ni-pinaro nomiso to nanom?
how-much *filling* 2s *water*
[+V] (Nom +PAT +past) (Gen +AGT) (Acc +INS)
how much water did you put in?

In example 3.69, the main verb is hacoa *how much, to what extent*. This sentence, as well as example 3.68, expresses the notion of "extent" or Increment which will be treated in section 3.7.2. For the time being, these examples serve to demonstrate the different ways in which the notion of Means can be realised.

3.3.3 Ramifications

In Amis, CR's marked on nominal actants are only one kind of syntactic device that the language can employ to express such notions as "instrument" and "place". Thus case-like notions such as "manner" in Amis find their expression in verbal constructions or complex verb forms (see section 3.7.1) rather than as case-marked NP's. Even for those notions that have matching CR's in the languages, there are often alternative ways of expression using verbal devices though the meaning or perspective will not always be exactly the same.

In the constructions described in sections 3.3.3.1 and 3.3.3.2 below, the notion of instrument is being expressed, but no explicit Instrument CR is marked on any of the nominal actants.

3.3.3.1 Deverbal Nouns with Implied Instrument

One way to express the notion of instrument is through nominalisation of action verbs. When an action verb stem is prefixed by sa-, a noun is created to mean "the means of performing the action indicated by the source verb". This derived N can be used as subject of an equational sentence, "equated" to a nominal predicate which refers to the concrete object that is employed as an instrument of the action implied by the verb stem. The nominal predicate can be interpreted as either definite or indefinite. Here are a few examples:

(3.70) o kamay noniam ko sa-pinaro tina karireng-an
hand lexcl *means-of-loading this cart*
[Neu] [Nom, +PAT] [Acc, +PAT] / [Lcv, +LOC]
we load this cart with our hands
Lit. *the means of loading this cart is our hands*

(3.71) o nanom no tebom ko sa-pibacaq noniam
water well means-of-laundering lexcl
[Neu] [Nom, +PAT] [Gen, +AGT]
we launder with well water
Lit. *our means of laundering is well water*

(3.72) . o rimom ato keliw ko sa-pi-tabid noniam
needle and thread means-of-mending lexcl
[Neu] (Nom +PAT) (Gen +AGT)

to bodoy ni ina ako
clothes mother 1s
(Acc +PAT)

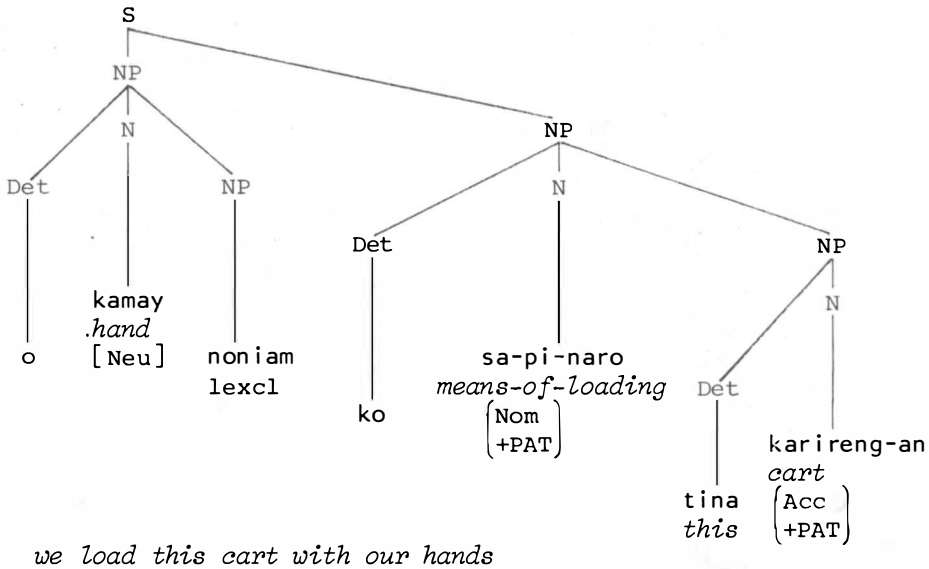
we mend my mother's clothes with needle and thread
Lit. *our means of mending my mother's clothes is needle and thread*

Subjects of equational sentences are marked as Nominative Patients. The nominal predicates in these examples are marked by the Neutral (Neu) case form. Predicates are not marked for case relations, so no [+INS] actant appears in these constructions.

Case frames are carried over in the process of nominalisation. In examples 3.70-3.72 all nominal constituents that follow the deverbal sa-noun are to be analysed as subordinate sister actants governed by the sa- N derived from the V. The case relations of these co-occurring actants are realised in oblique case forms. In these nominalised constructions, the Genitive case form marks the CR in the case frame of the corresponding verb which is highest in Fillmore's Subject Choice Hierarchy.

It turns out that this analysis allows for the presence of two Patients in examples 3.70 and 3.72, if the nominal actant tina karirengan in example 3.70 is treated as [+PAT] with respect to sa-pi-naro, while sa-pi-naro itself is also marked [+PAT] as the subject of the equational sentence. Since the [+PAT] actants are not sisters of the same lexical construction head, their occurrence in the same sentence does not violate the 1/Sent constraint. Of course, if we analyse tina karirengan as Locative Locus instead, the issue does not exist. A tree diagram of example 3.70 is given below to illustrate this point:

(3.70a)



we load this cart with our hands
Lit. *the means of loading this cart is our hands*

In the next section we will show that a derived sa- noun can also function as the subject of a derived verb with implied instrument. This class of verbs is derived by adding the suffix -en to the N whose referent is the instrument of the action concerned, as in kamay-en [+V] *done by hand* (lit. *be handed*) from kamay [+N] *hand* (cf. section 3.3.3.2.1).

A possible alternative analysis of noniam in examples 3.71 and 3.72 is to treat it as a true possessor, i.e., a Genitive Locus, instead of a Genitive Agent. However, this analysis is probably more appropriate to deverbal nouns such as duck-caller, mixer, and blender, to cite English examples, which have been further derived into the class of concrete nouns.

3.3.3.2 Derived Verbs with Implied Instruments

There are two subclasses of verbs in Amis that are derived from nouns whose referents are situational instruments of the actions indicated by these verbs. In other words, the instrument for the action is implied in the verb stem. Verbs belonging to these subclasses do not allow [+INS] in their case frame.

3.3.3.2.1 Denominal N-en Verbs

One subclass of Amis derived verbs with implied Instruments is characterised by the "passive" derivational suffix -en. In addition to the example kamay-en *done with hand* already cited in section 3.2.3.1, we can list the following from my data:

[+V]		[+N]	
lamal-en	*done with fire* (lit. *be fired*)	lamal	*fire*
hawan-en	*done with knife* (lit. *be knifed*)	hawan	*knife*
banoh-en	*done with feather* (lit. *be feathered*)	banoh	*feather*
lakaw-en	*done with pole* (lit. *be poled*)	lakaw	*pole, stick*
paqtang-en	*done with basin* (lit. *be basined*)	paqtang	*wooden basin*
sabon-en	*done with soap* (lit. *be soaped*)	sabon	*soap* (Taiwanese loan)

These derived N-en verbs with implied instruments do not permit [+INS] in their case frame. As members of the derived -en verb class (see section 6.2.3), these verbs require Patient subjects. The Patient subject can be either concrete, i.e., referring to concrete physical things affected by the action, or abstract. The following examples of derived -en verbs with concrete nouns as subject include some sentences from Starosta's data.

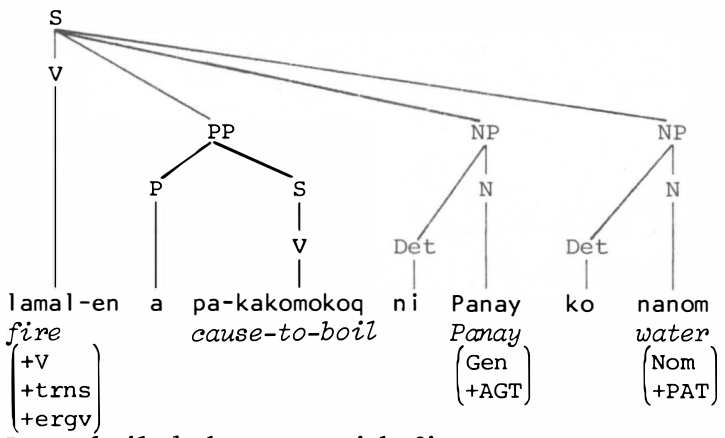
(3.73) lakaw-en no wawa a [mi-cait] ko tabo (M116)
pole *child* *hang* *rice-package*
[+V] (Gen, +AGT) (+V, -fint) (Nom, +PAT)
the child hung the rice-package up on a pole
Lit. *the rice-package was poled by the child in hanging*

(3.74) lamal-en ni Panay a [pa-kakomokoq] ko nanom (M43.1)
fire *Panay* *cause-to-boil* *water*
[+V] (Gen, +AGT) (+V, -fint) (Nom, +PAT)
Panay boiled the water with fire
Lit. *the water was fired by Panay to make it boil*

(3.75) hawan-en a [mi-pacok] no matoasay ko baboy (M57.1)
knife *slaughter* *old man* *pig*
[+V] (+V, -fint) (Gen, +AGT) (Nom, +PAT)
the old man slaughtered the pig with a knife
Lit. *the pig was knifed in slaughtering by the old man*

Note that the Agent actant and the verbal complement introduced by a can freely exchange their positions. Thus, example 3.74a, given in a tree diagram below, is identical in meaning to example 3.74.

(3.74a)
(M43.2)



Panay boiled the water with fire

Normally the Patient subject occurs in sentence-final position in such constructions. The NP's in a verbal construction can switch positions rather freely without resulting in change of meaning, except, of course, when the Genitive NP follows the Nominative NP and an ambiguity arises. My informants, however, seemed unconcerned about this ambiguity, taking for granted perhaps that the context would prevent any misunderstanding.

Derived N-en verbs also co-occur with the derived sa- nouns presented in section 3.3.3.1 which act as their Patient subjects. We may recall that a sa- noun refers to the means of performing the action indicated by the source verb. The sentence thus consists of a denominal V predicate and a deverbal N subject. The following example shows the combination of a series of such denominal V's as construction heads and a deverbal subject nominal in a compound sentence:

(3.76) paqtang-en, kamay-en, sabon-en
done-with-basin *done-with-hand* *done-with-soap*
[+V] [+V] [+V]

ko sa-pibacoq noniam
means-of-laundering lexcl
(Nom, +PAT) (Gen, +AGT)

we do our laundry using a wooden basin, hands, and soap

Lit. *our means of laundering is by a wooden basin, hands, and soap*

Three things are worth mentioning in conjunction with constructions like sentence 3.76. First, sentence 3.76 bears partial similarity to constructions like examples 3.70-3.72 due to the use of a deverbal sa- noun as its subject. Secondly, though sentence 3.76 has as its heads verb forms with the -en suffix, it is unlike examples 3.73-3.75 in not requiring co-occurring verbal complements. Thirdly, it should be pointed out that when a derived -en V is coupled with a sa- N, the implied instrument has a habitual reading in addition to its indefinite generic meaning.

Note the apparent similarity between 3.77a and 3.77b. In my analysis, the former is an equational sentence while the latter, a verbal construction.

(3.77a) o kamay ko sa-pibacoq noniam
hand *implement-for-laundering* lexcl
[Neu] (Nom, +PAT) (Gen, +AGT)

we launder by hand

(3.77b) kamay-en ko sa-pibacoq noniam
be-handed *implement-for-laundering* lexcl
[+V] (Nom, +PAT) (Gen, +AGT)

we launder by hand

Though kamay-en in 3.77b is probably different from those -en verbs in examples 3.73-3.75 on account of their difference in case frame, the analysis of it as a verb is justified by the following considerations: (1) while it is required in this study that all N's except pronouns are preceded by a Det, kamay-en here occurs alone in sentence initial position and (2) while kamay, like any other N, can be used as subject of a sentence, kamay-en never appears as such in my data. Example 3.78 below shows sa-pibacoq further derived as a verb with kamay serving as its subject.

(3.78) sa-pibacoq ko kamay noniam
used-for-laundering *hand* lexcl
(+V, +trns, +ergv) (Nom, +PAT) (Gen, +AGT)

we launder by hand

It is suggested by Starosta, Pawley, and Reid (1982), in accordance with the "from *fry-an PAN to i-fry" hypothesis that in Proto-Austronesian the nominalised constructions came first and that similar verbal constructions and focus system are historically more recent developments in Philippine-type languages. If the "*fry-an PAN" hypothesis is correct, then Amis is probably caught in the midstream with productive derivations yielding derived N's for equational sentences on the one hand and further derived V's on the other.

The derivation of Instrument-subject sa- verbs such as sa-pi-angang *use-for-calling* (from example 3.56) and sa-pi-adop *use-for-hunting* (from examples 3.57a and 3.57b) is accounted for in section 6.2.7.

3.3.3.2.2 Denominal si-N Verbs

Another class of Amis derived verbs with implied notional instrument is a subset of a class of Amis verbs characterised by the derivational prefix si-. While "passive" N-en verbs are ergative transitive action verbs, si-N verbs are stative intransitive verbs. As intransitive verbs they do not co-occur with Agent or Instrument; the latter being redundantly excluded because si-N verbs do not permit co-occurring [+INS].

Members of the derived si-N verb class with implied Instrument include:

[+V]		[+N]	
si-bakic	*with-a-bucket*	bakic	*bucket* (English loan?)
si-tokar	*with-a-ladder*	tokar	*ladder*
si-solo	*with-a-pestle*	solo	*pestle*
si-raqic	*with-a-rope*	raqic	*rope*
si-polong	*with-an-axe*	polong	*axe*

The gloss of these si-N verbs could have been *have-a-N* to generalise to other si-N verbs such as si-kawas *have-a-ghost, haunted*, si-pida *have-money, rich*, and si-ngangan *have-a-name, famous*. However, syntactically the si-N verbs with implied instruments behave more like manner verbs (see section 3.7.1) in that they can function as the main verb with obligatory verbal complement, as in examples 3.79 and 3.80 and are therefore glossed as *with-a-N*.

(3.79) si-bakic kia babahi a [mi-radom to nanom i tebom]
with-a-bucket *woman* *draw-from* *water* *well*
[+V] (Nom, +PAT) (+V, -fint) (Acc, +PAT) (Lcv, +LOC)
the woman used a bucket to draw water from the well

(3.80) na [si-tokar kis wama a [mi-ala tia nani]]
did *with-a-ladder* *the father* *rescue, get* *the* *cat*
(+V, +past) (+V, -fint) (Nom, +PAT) (+V, -fint) (Acc, +PAT)
the father used a ladder to resuce the cat

The derived verb with implied instrument is intransitive, and always takes a Patient subject. The verbal complement is introduced by the preposition a and has an implied subject, usually the Agent of an embedded transitive verb, which is co-referential with the Nominative Patient of the main verb. The syntactic behaviour of si-N verbs is thus similar to that of the manner verbs described in section 3.7.1.

Unlike manner verbs, however, si-N verbs can also be used as verbal complements with transitive main verbs. Reversing the order of the main verb and the embedded verb in example 3.79, we get the following well-formed Amis sentence:

(3.79a) mi-radom kia babahi to nanom i tebom a [si-bakic]
draw-from *woman* *water* *well* *with-a-bucket*
(+V, +trns) (Nom, +AGT) (Acc, +PAT) (Lcv, +LOC) [+V]
the woman draws water from the well with a bucket

The unexpressed subject of the embedded verb is co-referential with the Nominative Agent of the main verb. "Subject choice" for embedded verbs is similar to that of the main verbs; that is to say, for ergative verbs and intransitive verbs, the Patient is always the subject, but for transitive accusative verbs, the choice of the unexpressed subject follows Fillmore's Subject Choice Hierarchy.

The use of si-N forms to express the notion of instrument in such examples may be the source of the belief that Amis has a si- prefix marking "Instrument Focus" (Dahl 1973:118, 128; Ferrell 1971:4-5). However, as illustrated by the examples in this section, the derivational si- prefix (in Nataoran Amis at least) actually has a rather different syntactic and semantic function. As has been noted above in section 3.3.2.1, I have not found sufficient basis for positing a consistent "Instrument Focus" affix in Amis, although, as illustrated by examples 3.54-3.56, there are verbs that take Nominative Instrument. It must be re-emphasised that these verb forms are sporadic secondary developments and it would be misleading to label them as "Instrument Focus".

3.4 The Locus Case Relation [+LOC]

3.4.1 Characteristics

In *Aspects of the Theory of Syntax*, Chomsky makes a distinction between two types of locational constituents, namely, the Place constituent which, like the Time constituent, "has no particular connection with the verb" (Chomsky 1965:101), and those locational constituents which subcategorise the verb. Chomsky refers to the distinction as one of degrees of "cohesion" between the verb and its accompanying nominal actants. He illustrates his point with an ambiguous sentence:

(3.81) He decided on the boat.

which may mean "He chose the boat." or "He made the decision while on the boat."

Halliday makes a corresponding division in his circumstantial roles, distinguishing between an "inner" and an "outer" place function (Halliday 1970:149). In the lexicase framework, Starosta also posits an inner locative which is termed Locus [+LOC] and an outer locative which is termed Place [+PLC]. While Place generally refers to spatial location, Locus, according to Starosta, "may refer to spatial, conceptual, proximal, or even legally defined locations, depending on the semantic class of the verb with which it co-occurs" (Starosta 1978:20).

In the lexicase framework, given that the Patient is the fundamental case relation, a Locus specifies only the location of the Patient, not that of the Agent or other actants. The setting of the scene for the action or state as a whole is left to the Place case relation (cf. section 3.5).

As an inner case relation, Locus generally occurs with a restricted range of verbs, such as verbs of location or locomotion. With these verbs, the presence of [+LOC] is obligatory and its presence in turn characterises these verbs. Starosta further points out that,

> Patient and Locus can be said to identify each other: if a locational constituent singles out the location of only one of the sentence's actants and leave the position of the other participants in the action open, the locational constituent is an (inner) Locus, and the actant whose position it specifies is the Patient (op. cit.:20).

The so-called "indirect object" of ditransitive verbs in Tagalog has been re-analysed by DeGuzman (1978:51-54) as having the [+LOC] case relation instead of the Dative [+DAT] (relabelled in some lexicase studies as Experiencer [+EXP] or Correspondent [+COR] which was assigned to it in earlier lexicase grammars on the basis of Fillmorean case analysis.

3.4.2 Realisation

The Locus case relation can be realised only in the Locative [-Neu,+lctn,-sorc, -goal] case form (abbreviated as Lcv).

The presyntactic notion of location, like that of instrument, can also be expressed via nominal predicates or nominalisation in NP-NP constructions (see section 3.4.3.2 below).

With only one exception from my data, the Locus case relation is never realised in the Nominative case form in Amis. The fact that the head of the construction containing a Nominative Locus resembles a nominalised form suggests that we might have caught the forming of Locus-focus at its incipient stage in Amis, reflecting the situation in Proto-Austronesian before the development of Philippine focus systems (cf. Starosta, Pawley, and Reid 1982; and section 3.4.2.2).

3.4.2.1 Locative Locus

The [+LOC] actant usually occurs in a post-verbal position, and mostly immediately after the [+PAT] actant. The following examples show Locative Locus with location, locomotion and transportation verbs (see section 5.2 for the classification of Amis verbs):

(3.82)

mi-cangray	cira	i	cabang
lean-against	3s		*wall*
[+V]	[Nom, +PAT]	[Lcv, +Det]	[Lcv, +LOC]

he is leaning against the wall

(3.83)

ta-ngasa	cira	i	panan	a	[mi-dakaw]
go-up-to	3s		*gate*	*to*	*ride*
[+V]	[Nom, +PAT]	[Lcv, +Det]	[Lcv, +LOC]		[+V]

he rode up to the/a gate

(3.84) ma-korokoro anini kia bekeloq [tara]
roll *now* *the* *stone* *go-toward*
[+V] [Nom, +PAT] [+V]

i sasa no lotok
bottom *of* *hill*
[Lcv, +Det] [Lcv, +LOC]
the stone is rolling downhill

(3.85) t-em-irenq anini cira i tepar no salili
stand *now* 3s *side* *of* *post*
[+V] [Nom, +PAT] [Lcv, +Det] [Lcv, +LOC]
he is standing by the/a post

(3.86) itila-en ko tabako iso i kopkop
put-there *tobacco* 2s [Lcv] *basket*
[+V, +ergv, +mptv] [Nom, +PAT] [Lcv, +LOC]
put your tobacco in the/a basket

In examples 3.84 and 3.85, the locative expression is an NP consisting of a head N with a possessive attribute N. The head N in these NP constructions specifies the spatial orientation and is referred to as a locative relator noun (see section 3.4.3.4). Locative relator nouns behave syntactically like common nouns and co-occur with the locative determiner i. In examples 3.82-3.86, the locative determiner i can be interpreted as either definite or indefinite. If definiteness is to be specified, one normally uses one of the locative demonstratives — itia, itina, or itira — together with a noun from the class of location nouns whose members are usually marked by the derivational suffix -an. An example with locative demonstratives is given below:

(3.87) ira ko adiwawa itia potal(an)
there are *children* *yard*
[+V, +lctn] [Nom, +PAT] [Lcv, +Det, +dmns, -prxm, -rmte] [L, +LOC]
there are children in the yard

The -an suffix marks location nouns such as potalan *yard* that are synchronically derived as well as those that have a petrified -an such as kakarayan *heaven*. For a noun like potal *yard* or panan *gate* that already designates a location, the adding of a locational suffix -an is optional.

From section 3.1.3.2 we have seen in examples 3.30-3.33 that notional objects can be realised as Locative Locus. These actants are to be understood as "specific objects" of intransitive verbs. See section 3.4.3.4 below.

3.4.2.2 Locus-focus in Amis?

With the exception of only one form in my data, cited as example 3.91 below, Amis does not have Nominative Locus forms.

In Tagalog, according to DeGuzman's description (1978:88-90), [+NM,+LOC] seems rather common. When the inner locative case relation is realised in the nominative case form, the verb is always marked by the affix -an. Among De-Guzman's examples are (her CF's and CR's are cited without modification and her page and sentence number given in parentheses after each Tagalog example):

(3.88) papahiran niya ng barnis ang mesa (89:#74.b)
apply *he* *varnish* *table*
(+AC, +AGT) (+AC, +OBJ) (+NM, +LOC)
he will apply varnish on/to the table

(3.89) pinaglabhan niya ng damit na naputikan
launder *she* *dress* *soiled*
(+AC, +AGT) (+AC, +OBJ)

ang palanggana (89:#75.b)
basin
(+NM, +LOC)
the basin was used by her to launder the soiled dress in

(3.90) binigyan ni Clara ng regalo si Rosa (77.b)
give *gift*
(+AC, +AGT) (+AC, +OBJ) (+NM, +LOC)
Rosa was given a gift by Clara

To me, these Tagalog sentences look like equational sentences with deverbal location nouns serving as nominal predicates, these derived nouns carrying with them the original case frame of the verb stems. However, since the order of the [+OBJ] and the [+LOC] can exchange rather freely in Tagalog, thus making a nominal analysis untenable at least for the subject-internal examples, I agree with DeGuzman that these are truly verbal constructions with [+NM,+LOC] and would be willing to admit that the focus system in Tagalog is at a much more advanced stage than it is for Amis.

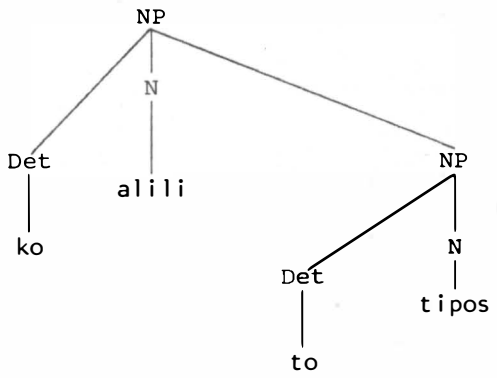
There is only one example in my data that may suggest the presence of Nominative Locus in Amis, the example being the following:

(3.91) sa-singaq-an ko alili to tipos
store *granary* *grain*
(Nom, +LOC) (Acc, +PAT)
grain is stored in the granary
Lit. *the granary is the storing place for grains*

This is not an NP-NP construction because such an analysis would call for a Nominative Patient; and if alili is the Patient subject, what can tipos be? In other words, to analyse sa-singaq-an as a Noun would leave tipos unaccounted for. I have not considered the alternative to analyse to tipos as a complement of ko alili with the following structural analysis because nominal

complements in Amis are normally in the Genitive case form or introduced by the ligature a (see section 4.2.2). The following analysis is rejected here.

(3.92)



To analyse sa-singaq-an as a Verb, on the other hand, can solve the problem by treating both NP's as its co-occurring actants. The verb form admittedly has its origin in a derived location noun. sa-singaq-an results from partial reduplication of the first syllable and the adding of the locational suffix -an to mean *the place where a certain action is habitually performed.* Examples include: ba-boting-an *fishing-ground*, qa-qadop-an *hunting-ground*, ta-taeq-an *anus*, in addition to sa-singaq-an *storage*.

It should be noted that the verb form of example 3.91 does not suggest a Locus-focus form even though the subject is identified as Nominative Locus.

3.4.3 Ramifications

3.4.3.1 Motion Verbs

There is a distinct class of situationally motion verbs with which the notion of location is expressed by the Patient case relation instead. These verbs are ergative verbs with [+PAT] subject but no [+LOC] in their case frame. Examples are:

(3.93) ma-dakaw nia wawa ko rangad
climb-over the child fence
[+V, +trns, +ergv] [Gen, +AGT] [Nom, +PAT]
the boy climed (over) the fence

(3.94) ma-hatebo nira ko ciris
jump-over 3s *stream, river*
[+V, +trns, +ergv] [Gen, +AGT] [Nom, +PAT]
he jumped (over) the stream

(3.95) ma-dangoy nira ko ciris
swim-across 3s *stream, river*
[+V, +trns, +ergv] [Gen, +AGT] [Nom, +PAT]
he swam (across) the river

(3.96) ma-taqlib ako ko lomaq namo io tara a dademak
pass-by 1s *house* 2pl *when going work*
[+V, +trns, +ergv] [Gen, +AGT] [Nom, +PAT] [+V] [+V]
I passed (by) your house on my way to work

For these ergative transitive verbs, Amis does not have intransitive counterparts like those suggested by the English translation in parentheses. Whatever degrees of transitivity might be suggested by the pairs of English forms (cf. Hopper and Thompson 1980) is simply not an issue here. These Amis situationally motion verbs are unique in the sense that they are marked for the localistic features that are otherwise marked on a co-occurring [+LOC] actant. See section 5.2.2 below.

3.4.3.2 Locative Predicates

In Amis, many situational roles find their expressions through non-CR means. As shown with the notion of instrument (cf. section 3.2.3), syntactic devices such as complementation or nominalisation are commonly used as alternatives to the case system in Amis.

The following examples show how a nominal predicate in a descriptive NP-NP construction can also express the notion of location:

(3.97) i kawili iso kia panan
left 2s *the door*
[Lcv] [Nom, +PAT]
the door is to your left

(3.98) i lomaq kia adiwawa
house the children
[Lcv] [Nom, +PAT]
the children are in the house

Note that by lexicase convention, nominal predicates are not marked for CR, but are marked by CF. The Locative CF, as shown by examples 3.97 and 3.98, is usually realised as i. Amis does not have a copula to link the two NP's. The relation between subject and predicate is expressed instead by word order, i.e., predicate preceding subject, and the difference in case forms, which is, in this case, [Lcv] for the predicate as opposed to [Nom] for the subject.

When a locative nominal predicate is followed by a verbal complement, the locative element carries with it the notion of location in relation to the action or state indicated by the verb. In other words, it indicates the general setting in space where an event takes place and hence the notion of

Place or the outer locative. It turns out this is the most common way to express the notion of Place in Amis (see section 3.5). Examples are:

(3.99) i lomaq kako a ma-labi
home 1s *eat-dinner*
[Lcv] (Nom, +PAT) (+V, -fint)
I eat dinner at home

(3.100) i Nataoran cira a ma-aroq
Nataoran 3s *live*
[Lcv] (Nom, +PAT) (+V, -fint)
he lives in Nataoran

(3.101) na [itini ko cabay ako a [tataang]]
here *friend* 1s *grow-up*
(+V, +past) [Lcv] (Nom, +PAT) (+V, -fint)
my friend grew up here

(3.102) itila-an a [pateli] ko codad nomiso i sapat
there *put* *book* 2s *table*
[Lcv] (+V, -fint) (Nom, +PAT) (Lcv, +LOC)
put your books down on the table

(3.103) i alili-an niam ko tipos a [mi-singaq]
granary lexcl *grain* *store*
[Lcv] (Nom, +PAT) (+V, -fint)
we store (all) the grain in our granary

(3.104) hali [i alili ko qedo a [misa-dipong]]
like-to *granary* *rat* *build-nest*
[+V] [Lcv] (Nom, +PAT) (+V, -fint)
rats like to build their nests in the granary

It suffices to say for the time being that the notion of Place is not normally expressed as a CR in Amis though it can be expressed as such. A discussion of Place and an account for some of these examples of locative predicates will be given in section 3.5 below.

3.4.3.3 Spatial Orientation

Where English employs a battery of prepositions such as at, on, in, by, before, after, from, to, for, between, above, below, under, and through to specify orientation in space and time, Amis would use as their translation semantically equivalent locative relator nouns instead. A list of the Amis locative relator nouns appearing in my data is given below with approximate English closses and corresponding prepositions enclosed in parentheses.

lalabo	*inside (in, inside)*
likot	*outside (outside)*
tepar	*side, proximity (by, near)*
kodokodol	*top, space above (on)*
sasa	*bottom, space below (under)*
qaqayaway	*front (before)*
lalikol	*back (behind, after)*
terong	*middle, midst (between)*

Formally, locative relator nouns function as the syntactic heads of their constructions and each of them requires the co-occurrence of a genitive NP, its obligatory attribute, to indicate the concrete physical location which serves as the point of reference for its spatial orientation. The head N is always preceded by the locative Det i.

The following are sentence examples showing locative NP's containing locative relator nouns.

(3.105) i qaqayaway no pangiroan kia lalan
front *station* *road*
[Lcv] [Gen] [Nom, +PAT]
the road lies before the station

(3.106) i lalikol no kilang a [mi-limak] kia adiwawa
back *tree* *hide* *the* *children*
[Lcv] [Gen] [+V, -fint] [Nom, +PAT]
the children hid behind the trees

(3.107) ira ko tamdaw i likot no sasinaran
locate *person* *outside* *window*
[+V] [Nom, +PAT] [Lcv, +LOC] [Gen]
someone is outside of the window

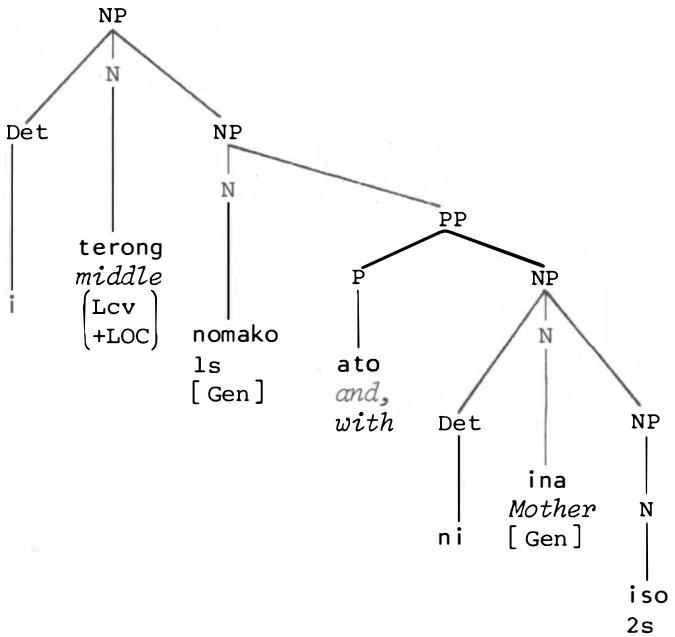
(3.108) ira ko tomay i lalabo nina lomaq
locate *bear* *inside* *this* *house*
[+V] [Nom, +PAT] [Lcv, +LOC] [Gen]
the bear is inside this house

(3.109) na [si-tokar kia wama a [mi-ala]
did *use-ladder* *the* *father* *get-from*
[+V, +past] [+V, +fint] [Nom, +PAT] [+V, -fint]
tia nani i kodokodol no kilang]
the *cat* *above* *tree*
[Acc, +PAT] [Lcv, +LOC] [Gen]
the father used a ladder and rescued the cat from above/up in the tree

(3.110) kati [ma-aroq i terong nomako ato ni ina iso]
come *sit-down* *middle* ls *and* *Mother* 2s
[+V] [+V] (Lcv +LOC)
come sit between me and your mother

The locative NP in example 3.110 is rather complex in structure. An analysis of i terong nomako ato ni ina iso *in between me and your mother* is given in the following tree diagram:

(3.110a)



A localistic analysis of locative relator nouns will be given in section 4.4.

3.4.3.4 Specific-Object Intransitives

As we have seen in section 3.1.3.1, there is a gradual shift of features in accordance with degrees of specificity. Specificity is not a feature in itself. In Figure 3.1 we have seen that as the degree of specificity increases, the semantic features of [+dfnt] (definite), [+prsn] (personal), and [+prnn] are added on one at a time. Non-specific then means [-prsn] (non-personal) and [-prnn] (non-pronominal). It does not have to be indefinite. The Det to in example 3.27 can have either a definite or indefinite reading.

It is interesting to note that in Tagalog (cf. DeGuzman 1978:36-38), the shift from Accusative to Locative marking takes place along the parameter of definiteness. In Amis, however, the notion of specificity as described in section 3.1.3.1 comes into play. On the non-specific end of the spectrum is the Accusative Patient whereas the specific end is occupied by the Locative Locus. Though the verb form remains unchanged throughout the gradual shift, an abrupt change from the transitive to the intransitive verb category is

effected with a change in CR-assignment. Both accusative Patient and Locative Locus are to be understood as notional "objects", though the latter is governed by an intransitive verb. Examples 3.30-3.33 show Locative Locus as the specific object of intransitive verbs.

3.5 The Place Case Relation [+PLC]

3.5.1 Characteristics

In the universal set of case relations proposed by Starosta (see section 3.1), there is an outer locative case relation, Place [+PLC], corresponding to the inner Locus [+LOC]. As we have already pointed out in section 3.4.1, the Place constituent has no particularly close connection with the verb, in the sense that it can occur with any construction, verbal or non-verbal, and any verb class without being restricted to verbs of location, locomotion, and transportation as the Locus case relation is. Instead of specifying the location of the Patient, a Place constituent gives the general setting of an action or state.

Being an outer case relation, PLC does not serve to subcategorise verbs. While LOC observes the strict post-Verb and post-Patient word order, a PLC constituent may occur in sentence-initial position preceding the verb, especially when there is already a LOC constituent in the sentence marked by a similar Locative case form.

In Amis, it is almost unnecessary to have a separate Place CR because the language favours a different syntactic device to indicate the general setting of an event in time and space, i.e., the use of nominal predicates in combination with verbal complements. The nominal predicates are unmarked for CR by lexicase convention. A nominal predicate that indicates the general location of an event is syntactically the head of an NP-NP construction. Locative nominal predicates are signalled by the locative marker i in sentence-initial position and require the co-occurrence of verbal complements to indicate the actions whose general settings are being predicated. This complementation strategy is commonly used in Amis for expressing attributes or adverbials. We shall return to this point in section 3.7 and section 4.3 below.

However, a distinct Place case relation must be set up on the basis of sentences given as examples 3.111 and 3.112 below. These two examples happen to be the only ones I can find in my data, although examples of locative nominal predicates are abundant.

3.5.2 Realisation

The Place case relation in Amis is realised only by the Locative case form, similar to the Locus case relation. Like the Locus CR, Place is not subject to the 1/Sent constraint provided that the sequence of locative nominal actants marked by [+PLC] hold co-referential inclusion relationship among themselves.

3.5.2.1 Locative Place

The following examples show PLC realised in the Locative case form. Examples 3.111 and 3.112 show the co-occurrence of two non-co-referential non-inclusive Locative NP's in the same sentence, a situation that motivates the setting up of a separate PLC case relation in addition to LOC in Amis so that the 1/Sent constraint is not violated.

(3.111) aka piqocil ici inaan i cacodadan haw?
don't hang-on-to *Mother* *school* QM
[+V] (+V, -fint) (Lcv, +LOC) (Lcv, +PLC)
don't hang on to Mother at school, OK?

(3.112) a makatepa kiso iciraan icoacoa i pacakayay
will find 2s 3s *somewhere* *market-place*
[+V] (+V, -fint) (Nom, +PAT) (Lcv, +LOC) (Lcv, +PLC) (Lcv, +PLC)
you'll find him somewhere in the market-place

The 1/Sent constraint requires that we treat the non-co-referential non-inclusive locative constituents as having two different CR's. The two Locative Place constituents in example 3.112 are co-referential inclusive and hence permitted by the 1/Sent constraint.

It should be re-emphasised that these two examples are the only instances in my data that call for inner and outer local CR's in the same sentence. With two local NP's available in the system, there is now the question of which one to assign when there is only one locative NP constituent in a sentence. Since the Amis language favours the use of nominal predicates to express the notion of the outer case relation, I am inclined to interpret an only locative CR as the inner Locus instead. If it had not been for examples 3.111 and 3.112, just one locative CR would have sufficed for the whole language. Fortunately, the seeming loss in economy in the Amis CR-system is compensated for by the accuracy of description and our extension of this sparsely used CR to cover the notion of Reference, with the help of localistic features (see section 3.5.3.2 below).

3.5.3 Ramifications

3.5.3.1 Locative Predicates

We have already dealt briefly with nominal predicates as an alternative syntactic device to express the notion of location in section 3.4.3.2 above. (Again, it is not clear whether the notion being expressed as the predicate is an inner or an outer locative or even whether this is a meaningful question. Once again I am in favour of the notion of Locus because I feel a closer cohesion relation between the predicate and the Patient subject in such descriptive constructions. Specifically, it is the location of the Patient subject that is specified by the locative predicate. Even though by lexicase convention no CR need be marked on nominal predicates, I would say that the locative predicate constituent is probably more closely associated with LOC than with PLC.)

A striking similarity exists between Amis locative predicates and the temporal predicates which will be described in section 3.6.3. This shows that the notions of time and location form a natural semantic class. They are expressed by similar syntactic devices whether or not the CR-system is involved. For examples of locative predicates see section 3.4.3.2 under the Ramification section of the Locus case relation.

3.5.3.2 Referent as Place

The notion of Referent (REF) is also known in the earlier lexicase literature as Benefit or Benefactive (BEN). The name change is fairly recent (cf. Fagan 1979:150) and for the purpose of suggesting a broader range of relationships. According to Starosta (1976a:23), the Referent case relation identifies the "target or evaluative reference point of the action or state as a whole". A REF is an outer case relation because it does not specifically evaluate the Patient. It is the action or state as a whole that is evaluated for its positive (or benefactive) or negative (or detrimental) effect on a certain person or thing. That certain person or thing is the point of reference. The occurrence of a REF is optional and should be independent of the verb class.

In Amis, the notion of Referent can be subsumed under the Place case relation. Instead of having a separate CR called Referent, we may extend the notion of Place to include Referent as an entity which serves as a point of reference for evaluation. A constituent carrying the notion of Referent can be marked [+PLC,+goal]. This analysis is possible because, according to my data, these actant types are in complementary distribution. That is, the Amis language does not have sentences with a [+PLC,+goal] co-occurring with another non-co-referential [+PLC]. In other words, what might be called a Referent constituent never co-occurs with another Place constituent and so the 1/Sent constraint is not violated by treating them as the same CR. As was mentioned in section 3.5.2.1 above, Locative Place occurs only very rarely and the notion of outer locative is more frequently expressed by the use of nominal predicates. This leaves the Place CR rather free to take on this additional function of identifying the evaluative reference point of the action or state.

The notion of Referent, represented in this study as an instance of the Place case relation further characterised by the localistic directional feature of [+goal], is realised by a prepositional phrase with the preposition saka followed by a locative NP marked by a locative determiner like i (saka and i often pronounced with the i-glide inserted, thus giving rise to the re-analysed form sakay). Except for the preceding preposition and the feature [+goal] on the head N, the referent NP is similar in form to the Locative Place constituents in examples 3.111 and 3.112. However, it is likely that a referent is often animate while an outer locative always refers to an inanimate location. Examples are given below.

(3.113)

misa-kalabi	ci	ina	saka	itamian
cook-dinner		*Mother*	*for*	lexcl
[+V, -trns]		[Nom, +PAT]	[+P, +rfrt]	[Lcv, +PLC, +goal]

Mother prepares dinner for us

(3.114) pa-tireng kami to cacodadan saka(y) i binawlan nia pala
build lexcl *school* *for* *people* *village*
[+V, +trns, -ergv] [Nom, +AGT] [Acc, +PAT] [+P, +rfrt] [Lcv, +PLC]
we built a school for the people of the village

(3.115) misa-kabi anini kako saka(y) i lalima a tamdaw
make-soup *now* ls *for* *five* *people*
[+V, -trns] [Nom, +PAT] [+P, +rfrt] [Lcv, +PLC, +goal]
I am making soup for five people

(3.116) si-niala kia tamdaw to karawad saka(y) i paliw nira
carry *man* *bag* *for* *friend* 3s
[+V, +trns, -ergv] [Nom, +AGT] [Acc, +PAT] [+P, +rfrt] [Lcv, +PLC]
the man carried the bag for his friend

Even with this extended use of the Place case relation, the Amis language does not seem to have any co-occurrence of LOC and PLC in the same sentence beyond examples 3.111 and 3.112 given above. Sequence of Locative NP's seems to be limited mostly to co-referential inclusive constituents marked by the same locative CR, that is, by either LOC or PLC and not by both CR's.

The notion of referent can also be expressed by verbal means in Amis with the verb patado *help* followed by a verbal complement as in example 3.117 below.

(3.117) patado kako a mi-pacodad tia mabotek-ay a babahi
help ls *write-letter* *blind-one* *woman*
[+V, +trns, -ergv] [Nom, +AGT] [+V, -fint] [Acc, +PAT]
I wrote a letter for the blind woman
Lit. *I helped the blind woman write a letter*

3.5.3.3 Habitual Place

The following examples are NP-NP constructions which feature nominalised forms carrying the meaning of a location where a certain action is habitually performed.

(3.118) i beliq no lotok ko qoaqoay-an noniam
next-beyond *hill* *rattan-area* lexcl
[Lcv] [Nom, +PAT]
we gather our rattan on the next hill
Lit. *our rattan area is on the next hill*

(3.119) o qaqadop-an noniam kina omaq
hunting-ground lexcl *this* *field*
[Neu] [Nom, +PAT]
this field is our hunting ground

In each of the nominalised forms, the root is reduplicated to indicate habitual action while the derivational suffix -an indicates that it is a location noun. The habitual place nouns are thus obtained through derivation.

3.5.3.4 Co-referentiality and the 1/Sent Constraint

Even though the metatheory allows for the co-occurrence of inner and outer locatives, the Amis language shows a strong preference to avoid crowding the case frame. This is done by employing different syntactic devices, one within and one without the CR-system. The only instances I have in my Amis data which show both the inner and outer case relation appearing in the same sentence have been given in section 3.5.2.1. In this section, they are cited again to check co-referentiality of the locative elements.

(3.120)

aka	piqocil	ici	inaan	i	cacodadan	haw?
don't	*hang-on-to*		*Mother*		*school*	QM
[+V]	(+V, -fint)		(Lcv, +LOC)		(Lcv, +PLC)	

don't hang on to Mother at school, OK?

(3.121)

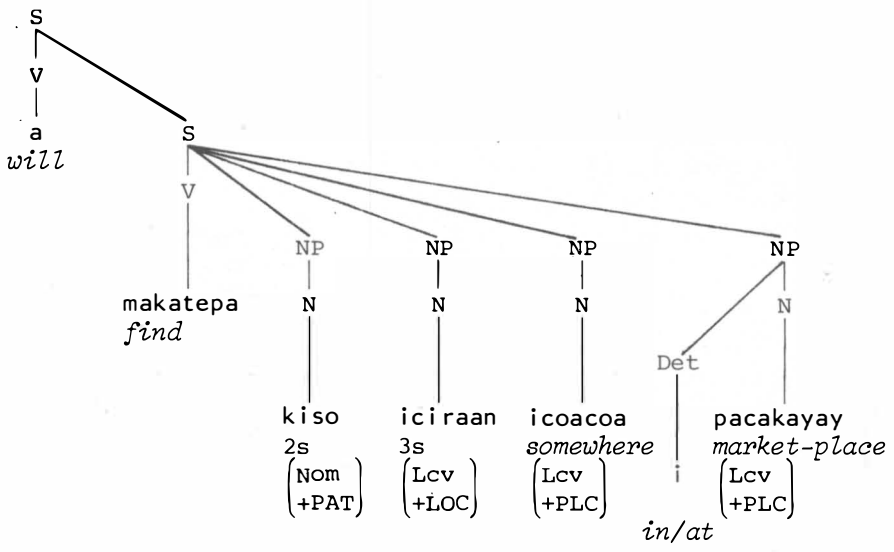
a	ma-katepa	kiso	iciraan	icoacoa	i	pacakayay
will	*find*	2s	3s	*somewhere*		*market-place*
[+V]	(+V, -fint)	(Nom, +PAT)	(Lcv, +LOC)	(Lcv, +PLC)		(Lcv, +PLC)

you'll find him somewhere in the market-place

We have already pointed out in conjunction to these examples in section 3.5.2.1 that two of the locative NP's in each of these sentences are not co-referential, nor is one inclusive of the other. The 1/Sent constraint would require under such circumstances that we assign them two different locative CR's.

Now I would like to point out that the two PLC actants in example 3.121, icoacoa *somewhere* and i pacakayay *in the market-place*, however, hold a co-referential and inclusive relationship between themselves. The tree representation of sentence 3.121 is given below:

(3.121a)



3.6 The Time Case Relation [+TIM]

3.6.1 Characteristics

The Time case relation is, like Place, an outer case relation which does not stand in an immediate correspondence to the Patient. Rather, Time gives the temporal frame of reference for the whole action or state. In other words, Time designates the general setting of an event in terms of its location, orientation, and duration in time. Like the Place CR, Time can occur with all verb types.

While recognising the parallels in the semantic characterisation of time and place, we are required by the 1/Sent constraint to set up two CR's, Place and Time, to accommodate their co-occurrence in the same sentence, since their referents are never in a co-referential inclusion relationship.

3.6.2 Realisation

Time (TIM) does not have a unique case form associated with it. It is realised in the Locative (Lcv) and the Accusative (Acc) case forms. Examples are given below.

3.6.2.1 Locative Time

The following examples show TIM realised by the Locative (Lcv) case form.

(3.122) na [o maan ko demakan ni Adop i nacila a kalahokan]?
did *what* *deed* *Adop* *yesterday* *afternoon*
(+V, +past) [Neu] (Nom, +PAT) (Lcv, +TIM)
what did Adop do yesterday afternoon?

(3.123) i salopiko na [o pacakayay i na-ayaw]
corner *did* *store* *before*
(Lcv, +PLC) (+V, +past) (Neu, +topc) [Lcv]
at the corner, there used to be a store before

(3.124) i nikaqorip ako o nopangcaq ko soal nomako
lifetime 1s *Amis-language* *speech* 1s
(Lcv, +TIM) (Neu, +prdc) (Nom, +PAT)
I have spoken Amis all my life
Lit. *all my life, my speech has been Amis (of Pangcaq)*

(3.125) i kakakematan helangen to nako
bedtime *take-off* 1s
(Lcv, +TIM) (+V, +trns, +ergv) (Gen, +AGT)

ko	bodoy	ako;	itoa	pacelol	to	sakabotiq
	clothes	1s	*later*	*put-on*		*pajamas*
	[Nom +PAT]			[+V +trns -ergv]		[Acc +PAT]

at bedtime, I take off my clothes and then (I) put on the pajamas

Note that in examples 3.124 and 3.125, TIM occurs before the construction head, whether it is a verb or a nominal predicate, just like PLC in example 3.123. This position preceding the construction head indicates that TIM and PLC are outer CR's. An inner CR such as LOC would not be allowed before the Patient.

Example 3.123 shows a topicalised NP-NP construction embedded under the verb na. The Locative Time constituent i na-ayaw *before* is analysed as the predicate of the NP-NP construction though it comes at the end of the sentence. Since CR's are not marked on nominal predicates, the notional Time constituent in example 3.123 is simply marked by the case form [Lcv].

3.6.2.2 Accusative Time

The following examples show TIM realised by the Accusative (Acc) case form. It is not restricted to to, the Accusative form of the non-personal article o, though to is the most frequently encountered form in this context. Examples of Accusative Time are given below.

(3.126)

ala-en	kina codad	a [patalomaq]	tina labi
take	*this book*	*bring-home*	*this evening*
[+V +trns +ergv +impr]	[Nom +PAT]	[+V -fint]	[Acc +TIM]

take this book home tonight

(3.127)

caay	ka [olah]	kako	a	[tahkal	to	labi]
don't	*like*	1s		*go-out*		*evening*
[+V +ngtv]	[+V -fint]	[Nom +PAT]	[+P]	[+V -fint]		[Lcv +TIM]

I don't like to go out at night

(3.128)

o maan	ko sakaranam		nomiso	to cila	a dabak?
what	*food-for-breakfast*		2s	*tomorrow*	*morning*
[Neu]	[Nom +PAT]			[Acc +TIM]	

what will you have for breakfast tomorrow morning?

(3.129)

kalamkam	sa	kako	a [si-bodoy]	to daba-dabak
quick		1s	*dress*	*every-morning*
[+V -trns]	[+Adv +mnnr]	[Nom +PAT]	[+V -fint]	[Acc +TIM]

I get dressed quickly every morning

(3.130) ma-ngeroq sa kako a [ta-lomaq] to na-dademak
tired ls *go-home* *time-after-work*
(+V, -trns) (+Adv, +mnr) (Nom, +PAT) (+V, -fint) (Acc, +TIM)
I always come home tired after work

As we already know, to is unmarked for definiteness and the TIM expressions with to can be interpreted as being either definite or indefinite.

3.6.3 Ramifications

3.6.3.1 Temporal Predicates

The presyntactic notion of Time, like that of Place or Instrument, can be expressed by nominal predicates in NP-NP constructions. Locative temporal expressions may be used as nominal time-word predicates in descriptive NP-NP constructions. Since predicates are not marked for CR in a lexicase analysis, we simply mark the head N with the Lcv case form. Examples are:

(3.131) i pitoay sa kako a [l-em-oad]
seven ls *get-up*
[Lcv] (+Adv, +aspt, -drtv) (Nom, +PAT) [+P] (+V, -fint)
I get up at seven

(3.132) i pitoay a toki a [ma-labi] kako
seven *time* *have-supper* ls
[Lcv] (Japanese loan) (+V, -fint) (Nom, +PAT)
I eat supper at seven o'clock

(3.133) i terong han no pitoay a tatokian a
middle *exactly* *seven* *o'clock*
[Lcv] (+Adv, +mnnr)

[mi-lineng] nomako ko toki
set ls *time* (Japanese loan)
(+V, +trns, +ergv, -fint) (Gen, +AGT) (Nom, +PAT)
I set the time at exactly seven o'clock

The locative Time predicates in examples 3.131-3.133 all require the complementation of a finite verb of action.

Locative relator nouns such as terong *middle* are used as head nouns of temporal expressions. As with locative expressions, these relator nouns indicate orientation. By referring to certain points on the time axis like qaqayaw *before*, terong *middle*, and toa *after*, we can indicate the time in relation to the event (see section 4.4).

3.6.3.2 Telling Time in Amis

Starosta (1978:496, 506) has indicated that, for PLC and Tim, there can be more than one instance per sentence provided that these nominal constituents bearing the same CR are co-referential and inclusive of one another within the same domain. Thus the following sentence from Amis, though with at least two independent [+TIM] nominals, does not violate the 1/Sent constraint:

(3.134) i nacila [i sepatay ko toki] to namalahok
yesterday *four* *time* *afternoon*
(Lcv, +TIM) [Lcv] (Nom, +PAT) (Acc, +TIM)

o maan ko demakan nomiso?
what *doing* 2s
[Neu] (Nom, +PAT)

yesterday at four o'clock in the afternoon, what were you doing?

One might have already noticed the Nominative marker ko in the time expression i sepatay ko toki *at four o'clock* and wondered about its syntactic analysis. The expression i sepatay ko toki is actually a complete sentence with a locative descriptive predicate, embedded and used in place of a single [+TIM] phrase without any structural modification. In other words, example 3.134 takes a sentence with a temporal predicate and uses it, subject and all, as a Time phrase. In examples 3.135a and 3.135b we shall show how Amis expresses the hour and the half hour respectively.

(3.135a) i walo-ay ko toki nomako a [ma-lingad]
eight *time* 1s *depart*
[Lcv] (Nom, +PAT) [+P] (+V, -fint)

I leave (the house) at eight

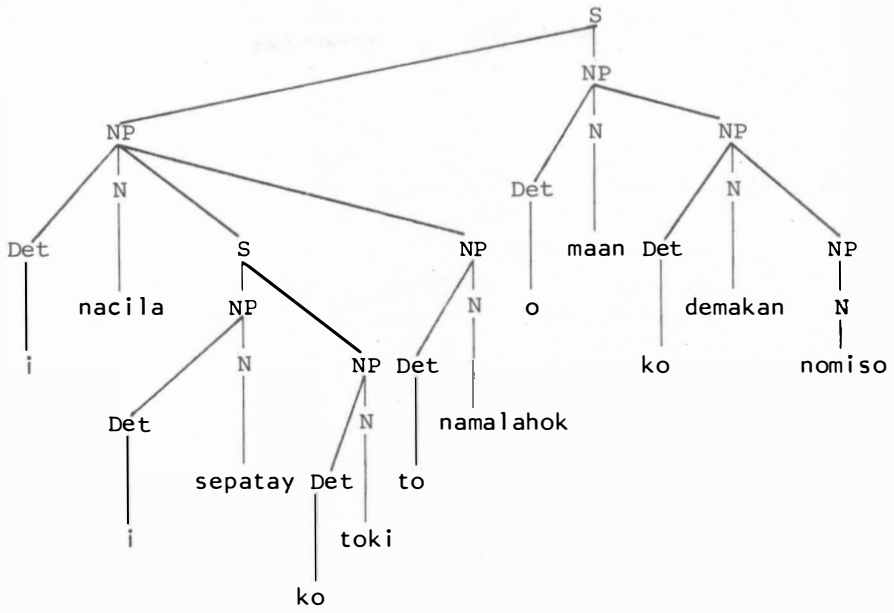
(3.135b) i walo-ay ko toki [ira ko pangkiw]
eight *time* *half*
[Lcv] (Nom, +PAT) [+V] (Nom, +PAT)

a [tangasa i kadademakan]
arrive *working-place*
[+V] (Lcv, +LOC)

I get to the office at half past eight

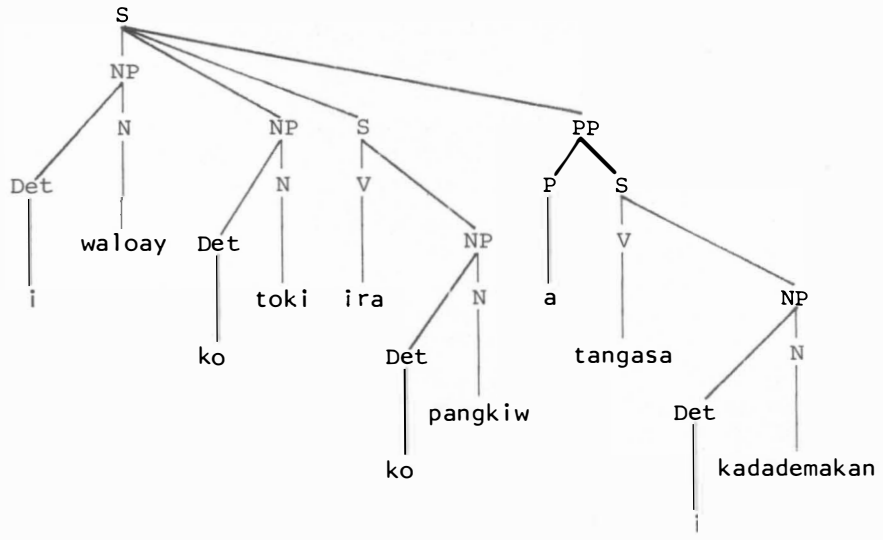
The half hour is expressed by an embedded existential sentence, ira ko pangkiw, which means *there is one half*, used as a complement of the locative descriptive predicate nominal, i walo-ay *at eight o'clock*. Both 3.135a and 3.135b have an abstract quality noun toki *time* as subject and a time expression, simple or complex, as the locative predicate. The action whose temporal setting is being specified is given as the verbal complement of the descriptive NP-NP construction. *The half hour*, ira ko pangkiw, like the included portion of time in example 3.134, is an unmodified embedded sentence. Tree diagram corresponding to examples 3.134 and 3.135b are given below for a clearer schematic representation.

(3.134a)



yesterday at four o'clock in the afternoon, what were you doing?

(3.135c)



I get to the office at half past eight

The Amis way of counting a number between ten and twenty is based on the following formula:

(3.136) sabaw [ira ko n] n = *1, 9*
twenty exist
n-teen

also involving an embedded S. The number *11* is therefore sabaw ira ko cacay and *12*, sabaw ira ko tosa. *Twelve o'clock* is then i sabaw-ay ko toki ira ko tosa as in the following example:

(3.137) kia haw [i sabaw-ay ko toki [ira ko tosa]
about probably twenty time exist two
[+V] [+Adv] [Lcv] (Nom, +PAT) [+V] (Nom, +PAT)

nomako a [talapotal a [malahok]]]
1s *go-out* (+V, -fint) *eat-lunch* (+V, -fint)
I'll probably go out for lunch at about twelve

Duration, or a period of time, is expressed as the extent of an action or state. The syntactic device used for the expression of duration is that used for expressing the notion of Increment described in section 3.7.2. It is a device involving descriptive predicates and verbal complementation, similar to that used for the expression of Time. There are, however, three interesting points of difference between the expression of Duration and Time: (1) with Duration, the descriptive predicate is not marked by the locative marker i, (2) the subject is not toki *time*, an abstract quality noun, and (3) while the head of a Time predicate is a derived N, morphologically marked by the suffix -ay, the head of a Duration predicate is an underived numeral. Here is an example:

(3.138) sabaw [ira ko pito] a mihca cira
twenty exist seven year 3s
(+N, +nmrl) [+V] (Nom, +PAT) (Nom, +PAT)

i Nataoran a [ma-aroq]
Nataoran live
(Lcv, +LOC) (+V, -fint)
he lived in Nataoran for seventeen years

Without a preceding determiner and a nominal suffix, the status of the head of a Duration phrase such as sabaw in sabaw ira ko pito a mihca *seventeen years* is unclear. Syntactically, it is more like a Noun because it takes an attributive nominal complement, for example, a mihca in sentence 3.138. It is not analysed as an adjective because it is not specified by degree like the descriptive adjectives (cf. Schachter MS:19). In some respects sabaw resembles a verb in that it can be modified by an aspectual adverb such as henay *already*, as in the following example.

(3.138a) sabaw henay [ira ko pito] a mihca
twenty already exist seven year
[+N, +nmrl] [+Adv, +prft, +cont]

'cira i Nataoran a [ma-aroq]
3s *Nataoran* *live*
[Nom, +PAT] [Lcv, +LOC] [+V, -fint]

he has already lived in Nataoran for seventeen years

The adverbial element henay can be regarded as a sentence adverbial that is attached to the head of the construction. Perhaps this is a good place to point out that, in Amis at least, it is not unusual for nominal elements to be modified by tense or aspect, as witnessed by the terms na-si-pida-ay *the one who used to be rich* and Na-taor-an *Nataoran, the place that used to have the taor trees*, na being known to be the indicator of past tense. I have analysed the numerals here as Nouns, marking them with the special contextual feature [-[+Det]] to indicate that members of this subclass of Nouns do not co-occur with Determiners. In section 5.3.1 below, an alternative verbal analysis is provided.

3.7 Other Case-like Notions

The universal set of case relations, since its inception in 1968, has grown from a membership of six — Agentive (A), Instrumental (I), Dative (D), Factitive (F), Locative (L), and Objective (O) (Fillmore 1968:24-25) to a dozen or more as shown in many Fillmorean case grammars. For example, Nilson (1973:103, 130-132) has listed fifteen "Deep Cases", namely Agent, Instrument, Body Part, Force, Material, Experiencer (Dative), Objective, Manner, Extent, Reason, Locative, Temporal, Source, Path, and Goal (including Benefactive). In his study of Bunun, Jeng (1977:62-63) has also come up with a list of fifteen cases. Lexicase grammarians, as Figure 2.7 in section 2.4.1 shows, have stayed within the range of seven to ten CR's. In lexicase, a constant attempt has been made to curb any unnecessary increase in the CR inventory, the effort beginning with Starosta's rejection of a [causer] case relation to be added on behalf of derived causative verbs (Starosta 1974:285-292). The most recent list of CR's proposed by Starosta (1982d:17), given in Figure 2.5 of section 2.4.1, consists of ten members: AGT, COR, INS, LOC, MNS, NCR, PAT, PLC, REF, and TIM.

In the sections above, we have already presented PAT, AGT, INS (including MNS), LOC, PLC (including REF), and TIM. INS is broadened to mean any immediate and intermediate cause of an action. As shown in the discussion in section 3.2.3 under AGT and in section 3.3.3 under INS, the function of notional instrument and means can actually be redistributed in these two case relations.

I would like to point out again that, though the notions of Patient, Agent, Locus, Instrument, etc. are universal, not all languages express these notions exclusively by case systems, i.e. by marking the nominal actants of the verb with CR's and CF's. In Amis, many case-like notions can be expressed by more than one kind of syntactic device while others, such as Manner, may bypass the

case system and use verbal complementation as the only means of surface manifestation. In section 3.5 I have also shown that in Amis the notion of Place as the outer locative is expressible almost exclusively as nominal predicates in NP-NP constructions, also with verbal complementation. The syntactic devices by which the notions of Instrument, Locus, Place, and Time can be alternatively expressed are given in their respective sections on realisation within the case system.

In the sections 3.7.1, 3.7.2 and 3.7.3 below, I shall deal with three other case-like notions, namely, Manner, Increment and Concomitant, and show how these notions are expressed syntactically in Amis. The presyntactic notion of Correspondent is treated in section 3.7.4.

3.7.1 Manner

The presyntactic notion of Manner designates the manner in which an action is performed. In English and Thai (Kullavanijaya 1974:53-54), the notion of Manner is expressed by a nominal actant realised in the Instrumental case form. In the following is an English example to be followed by two Thai examples (Kullavanijaya's original sentence number given in parentheses):

(3.139) He packed the suitcase with care.

(3.140) daeaeng khaa khon taay dooy khwaampra?maat (48)
Dang kill man die with recklessness
$\begin{pmatrix}+P\\+M\end{pmatrix}$ $\begin{pmatrix}+N\\+AC\\+MAN\end{pmatrix}$
Dang killed a man recklessly.

(3.141) daeaeng hen khaw thuuk ying kap taa (49)
Dang see he shoot with eye
$\begin{pmatrix}+P\\+C\end{pmatrix}$ $\begin{pmatrix}+N\\+AC\\+MAN\end{pmatrix}$
Dang saw him shot with his own eyes.

In Amis, however, the notion of Manner is not expressed through the case system. Rather, it is expressed through the use of a stative verb with a verbal complement, as in the following examples:

(3.142) ma-sengib cira a [mi-lias]
sad 3s *leave*
$\begin{pmatrix}+V\\-trns\end{pmatrix}$ $\begin{pmatrix}Nom\\+PAT\end{pmatrix}$ [+V]
he went away sadly

(3.143) ma-kalah cira a [mi-lias]
hasty 3s *leave*
$\begin{pmatrix}+V\\-trns\end{pmatrix}$ $\begin{pmatrix}Nom\\+PAT\end{pmatrix}$ [+V]
he left in a hurry

(3.144) ma-calibad cira a [mi-parokod to panan]
angry 3s *kick* *door*
[+V, -trns] [Nom, +PAT] [+V] [Acc, +PAT]
he kicked at the door in anger

(3.145) si-losa cira a [mi-si-olah to wawa nira]
with-tears 3s *plead* *child* 3s
[+V, -trns] [Nom, +PAT] [+V] [Acc, +PAT]
in tears she pleaded to her child

The main verbs in examples 3.142-3.145 are all stative verbs. While those in examples 3.142-3.144 belong to the ma- class, the main verb in example 3.145, si-losa, is derived from losa *tear* with the derivational prefix si- which is used to derive verbs from nouns that are the implied instruments of the actions designated by the verbal complements (see section 3.2.3.2.2), marking another possible generalisation that in natural languages the syntactic device used to designate manner is similar to that for designating instrument.

(3.146) edeng han nira a [mi-bawah] kia panan
force *thus* 3s *break* *door*
[+V, +trns, +ergv] [+Adv, +mnnr, +rslt] [Gen, +AGT] [+V, -fint] [Nom, +PAT]
he broke the door by force
Lit. *he forced the door to break*

(3.147) cakewit han nira a [mi-bawa] kina bekeloq
heave-with-ease *thus* 3s *lift* *this* *rock*
[+V, +trns, +ergv] [+Adv, +mnnr, +rslt] [Gen, +AGT] [+V] [Nom, +PAT]
he lifted this rock with ease

The use of han to designate manner is common with a special class of underived ergative transitive verbs. These verbs are resultative verbs whose effect is indicated by their verbal complements. Verbs such as those in examples 3.146 and 3.147 are difficult to gloss because their closest equivalents in English are often manner adverbials and not transitive verbs.

Example 3.148 below has an instrument reading. It is parallel in structure with the Amis examples above in that the case-like notions are not expressed by CR's marked on nominal constituents but by verbal devices instead.

(3.148) si-bakic kia babahi a [mi-radom to nanom i tebom]
with-a-bucket *woman* *draw-from* *water* *well*
[+V, -trns] [Nom, +PAT] [+V, -fint] [Acc, +PAT] [Lcv, +LOC]
the woman drew water from the well with a bucket

3.7.2 Increment

The notion of Increment (NCR) has been introduced to the universal set of case relations by Starosta (to appear a) to deal with issues of structural relatedness and case assignment in pairs of English sentences like the following:

(3.149a) Mary handed the book to John.
AGT PAT LOC

(3.149b) Mary handed John the book.
AGT PAT NCR

(3.150a) Mary gave the pig to John in a blanket.
AGT PAT LOC MNS

(3.150b) Mary gave John the pig in a blanket.
AGT PAT NCR MNS

The correspondence between the (a) and (b) sentences has been handled by a number of linguists with a transformation rule called "Dative Movement" (cf. Jackendoff 1972:156-178; Akmajian and Heny 1975:178-179,183-186).

In a lexicase analysis, the 1/Sent constraint and the saturation of CR's in sentences like 3.151c point to the need for establishing a new CR.

(3.151a) Mary towed John three miles in a dinghy.
AGT PAT ? MNS

(3.151b) Mary towed John three miles in a dinghy.
AGT PAT ? LOC

(3.151c) Mary towed John three miles in a dinghy with her motor launch.
AGT PAT ? LOC INS

The constituent three miles in these examples cannot possibly be an AGT, a PAT, a LOC, or an INS due to the 1/Sent constraint. Conceptually, the notion of Increment (NCR) expresses the "extent to which the state or effect applies to the PAT" (Starosta to appear a:1). I suppose the Increment would be an inner case relation, if the notion is expressed as a CR on nominal constituents, because of its close relationship with the PAT and its obligatory co-occurrence with certain verbs such as weigh in example 3.152.

(3.152) The elephant weighs two tons.
PAT NCR?

However, there is still one inner case relation in Starosta's universal set of CR's, namely, the Correspondent (COR), which might be extended to cover the notion of Increment (NCR) since the two seem to be in complementary distribution in the sense that they do not seem to co-occur in the same sentence with the same verb. I shall leave this topic for future investigation.

In Amis, the presyntactic notion of Increment, i.e., the "extent to which the state or effect applies to the Patient", is not expressed as a CR. Rather, it is expressed as the predicate of a descriptive construction whose subject is an abstract quality noun such as baqket *weight*, tenes *duration*, and taraqyaq *length*, or, it may be expressed as a predicate with a verbal complement, in constructions comparable to those used to express the notions of Manner, Time, and Place when they are not represented by CR's.

Examples 3.153-3.161 below show the notion of increment expressed as the descriptive predicate of abstract quality nouns. Example 3.160 has nominal predicates clearly marked by the nominal suffix -ay and the presence of Det while the others have nominal predicates that resemble adjectival predicates. The heads of these constructions belong to a special class of numeral nouns that do not require a preceding Det. The head N in example 3.159 is especially interesting because it has the nominal affix but not the Det. In these examples, the notion of increment is to be interpreted as the extent to which a "state" applies to the Patient.

(3.153) hacoa ko baqket nira baboy saw?
how-much, to-what-extent *weight* *pig* QM
(+N, +nmrl) (Nom, +PAT)
how much does that pig weigh?

(3.154) ina adiding-ay a baboy, sepat a poloq
this small-one *pig* *four* *ten*
(+Neu, +topc) (+N, +nmrl)
[ira ko lima] a dodoy kia ko baqket
five *pound* *about* *weight*
(Nom, +PAT)
as for the small pig, it weighs about thirty-five pounds

(3.155) hacoa ko dadahal nina sasingaran?
how-much *width* *this* *window*
(+N, +nmrl) (Nom, +PAT)
how wide is this window?

(3.156) hacoa saw ko tohem nina remiad?
how-much QM *temperature* *this* *day*
(+N, +nmrl) (Nom, +PAT)
what is the temperature today?

(3.157) lima a poloq a dadidekan ko taraqyaq nia kayakay
five *ten* *metre* *length* *bridge*
(+N, +nmrl) (Nom, +PAT)
the bridge is 50 metres long

(3.158) hacoa ko [tadah nomako itisoan]?
how-much *debt* 1s 2s
(+N, +nmrl) (Nom, +PAT)
how much do I owe you?
Lit. *how much is my debt to you?*

(3.159) hacoa-ay ko dadahal no sasabodoyan nomiso?
what-extent *size* *wearing* 2s
(+N, Neu) (Nom, +PAT)
what size do you wear?

(3.160) o terong-ay ko tataang no kaway nomako
medium-one *bigness* *package* ls
[+N, Neu] [Nom, +PAT]
my package is medium-sized

(3.161) hacoa ko tenes no codad a [ta-ngasa i Taihoko]?
how-much *duration* *letter* *arrive* *Taipei*
[+N, +nmrl] [Nom, +PAT] [+V, -fint] (Japanese loan)
how long does it take a letter to get to Taipei?

Examples 3.162-3.164 below show an alternative way for expressing the notion of increment, that is, as the predicate of an animate subject that is also the unexpressed subject of an embedded verbal construction. In these examples, the notion of increment is to be interpreted as the extent to which an "effect" applied to the Patient.

(3.162) lima henay a mihca kako a [itini a [ma-aroq]]
five *already, still* *year* ls *here* *live*
[+N, +nmrl] [+Adv, +sptl] [Nom, +PAT] [+V, -fint]
I've already lived here for five years

(3.163) pina henay a mihca kohni na [ma-ramod]
many *already* *year* 3pl *married*
[+N, +nmrl] [+Adv, +sptl] [Nom, +PAT] [+V, +past] [+V, -fint]
they have been married for quite a few years

(3.164) kinacacay sa kia kako a [mi-araw
past-once *about* ls *see*
[+V, +past] [+Adv, +sptl, -cont] [Nom, +PAT] [+V, -fint]

to ega] to cacay-ay a lalipayan
movie *one* *week*
(Japanese loan) [Acc, +TIM]
I used to go to the movies about once a week

3.7.3 Concomitant

Fagan (1979:151) has used the term Concomitant case relation to denote what is traditionally known as the Comitative case, defined by Taylor (1971:42) as an actant which is associated in a parallel way with another actant in the verbal activity or state described (see also Starosta 1976d:1081). The change of label is in keeping with Harmon's convention (1977) of reserving terms ending in *-ive* for case forms.

In Amis, the notion of concomitant can be manifested by a special class of verbs with mal- prefixed to the Noun which is a partner or companion in the activity indicated by the main verb. The derived verb is used only as a verbal complement and always indicates indefinite co-participants. Examples are:

(3.165) misa-kero kami a mal-kaka
dance lexcl *be-with-elder-sibling*
[+V, +fint] [Nom, +PAT] [+V, -fint]
I danced with my elder brothers and sisters
Lit. *I, together with my elder brothers and sisters, danced*

(3.166) misa-toron kami a mal-wina
make-rice-cake lexcl *be-with-Mother*
[+V, +fint] [Nom, +PAT] [+V, -fint]
Mother and I made some rice-cake
Lit. *I, together with Mother, made some rice-cake*

(3.167) mi-tapid kami a mal-wina to bodoy
mend lexcl *be-with-Mother* *clothes*
[+V, +fint] [Nom, +AGT] [+V, -fint] [Acc, +PAT]
Mother and I mend the clothes
Lit. *I, together with Mother, mend the clothes*

(3.168) mi-pinaro kami a mal-kaka tina karireng
fill lexcl *be-with-elder-sibling* *this* *cart*
[+V, +fint] [Nom, +AGT] [+V, -fint] [Acc, +PAT]
I, together with my elder brothers and sisters, filled this cart

(3.169) pinaro-en noniam a mal-kaka kina karireng
filled lexcl *be-with-elder-sibling* *this* *cart*
[+V, +fint] [Gen, +AGT] [+V, -fint] [Nom, +PAT]
I, together with my elder brothers and sisters, filled this cart
Lit. *this cart filled by me and my elder brothers and sisters*

Note that in all these examples the first person exclusive plural form is used even though the English gloss is in the singular. Also, the verbal complement, introduced by a, always comes immediately after the first person exclusive pronoun before other nominal actants in the same sentence. Since a also introduces a nominal complement, one may be tempted to interpret mal-kaka and mal-wina as derived nouns. This analysis is ruled out because, as nouns, they should be preceded by Det and there is none. Also, pronouns do not take nominal complements. Besides, there is in fact an alternative manifestation for the notion of concomitant in Amis using nominal complements, as in the following examples:

(3.166a) misa-toron kami a ci ina ako
make-rice-cake lexcl *mother* 1s
[+V, +fint] [Nom, +PAT] [Com]
I and my mother made some rice-cake

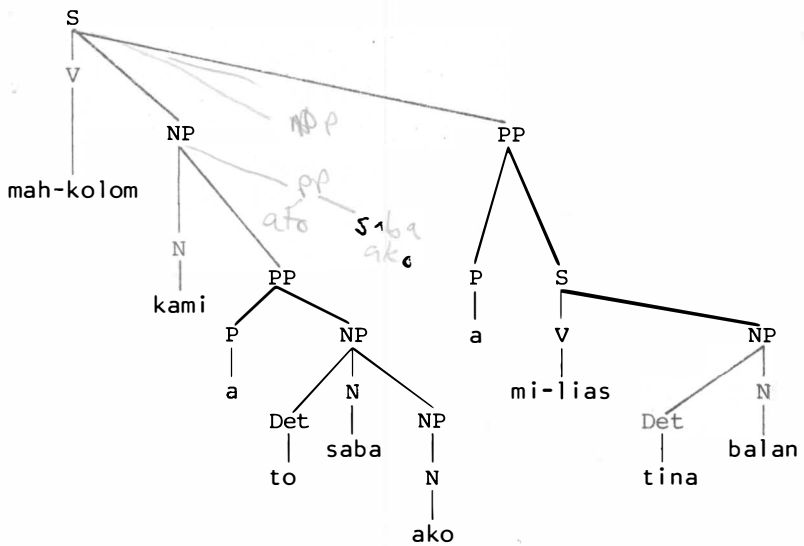
(3.170) mah-kolom kami a to saba ako
bring-together lexcl *younger-sibling* 1s
(+V, +fint) (Nom, +PAT) [Com]

a [mi-lias tina balan]
leave *this* *place, area*
(+V, -fint) (Acc, +PAT)

I and my younger brothers and sisters band together to leave this area

The tree-diagram for example 3.170 is given below:

(3.170a)



If we adopt this analysis and treat to saba ako as a nominal complement or a modifier of the head noun kami, we do not really need a separate Concomitant case relation. In fact, to saba ako, not being a sisterhead of the main verb, does not take part in the case frame that classifies the verb and therefore need not be marked for CR. The preposition a and the accusative case form to form a composite case marker a to for the Comitative case form. If we must assign a CR to saba, it should bear the same CR as kami since saba is included in kami and is therefore co-referential with it. In example 3.170, then, saba should also be marked by [+PAT]. Because of its co-referentiality with kami and because the actant is not in the verb's domain of subcategorisation, the 1/Sent constraint is not violated.

Parallel to a to is a ci for personal names. They are both composite case markers. See section 4.3.5 for ato *and*, a conjunction derived through a reanalysis of a to.

To sum up, while there is a distinct case marker for the comitative case form in Amis, there is no need to set up a concomitant case relation for the analysis of this language. The category will not serve to classify verbs and therefore has very marginal use in the system.

3.7.4 Correspondent

In this section, I venture to suggest the elimination of COR from the universal set of case relations. In view of its marginal use and the fact that its functions can be reassigned to other CR's, the status of COR in the system should be challenged.

As Fillmore's Dative (DAT) case is broadened to cover such relations as carried by the subject of a psychological verb and the possessor of a possessed noun, in addition to its traditional function as "indirect object", it has been relabelled as Experiencer (EXP), and later as Correspondent (COR) in Lexicase (cf. Fagan 1979:150 and Figure 2.7 in section 2.4.1).

As a CR, the Correspondent by its various names has always had some peripheral functions which I suspect could be assigned to other case relations. For instance, the Correspondent case relation has been used to account for the subject constituents of the class of psychological verbs, including perhaps verbs of existence, location, and possession. This function can now be reassigned to the Patient case relation in accordance with the lexicase claim that Patient is the fundamental case relation.

Also, the Correspondent case relation has been used to mark the possessor of possessed nouns (cf. Fagan 1979:54-56). I am not sure that this is necessary because, by lexicase convention, only those head nouns that are sisterheads of a verb need to be marked for CR. While predicate nominals are not sisterheads of a verb, they are not required to be marked for CR. The same should apply to the nominal attributes within NP constructions. Even if the relation between a head and its attribute is to be expressed by a CR, it does not have to be the Correspondent. In fact, it can be any reasonable CR without having to worry about the 1/Sent constraint. In the present analysis, I have chosen to assign it the localistic features [-nmtv,+drcn,+sorc] which correspond to the Genitive case form. No case relation is assigned to the possessor, though LOC is a possible analysis.

The notion of Correspondent has been regarded as particularly useful for expressing some "indirect object" of ditransitive verbs, especially when it comes to "morphological causative verbs" which result from the causativisation of transitive verbs (cf. Starosta 1978:541-542,547-550). When morphological causative verbs are derived in languages such as Tagalog (cf. DeGuzman 1978: 341-369), it is necessary to have a dummy category to designate the perceptual space to which the AGT or another CR can be demoted or reassigned when a new AGT is introduced by causative derivation. This dummy category has been the Correspondent. More specifically, the downgraded AGT is reinterpreted as Correspondent, and if the case frame already contains a Correspondent, 1/Sent required this latter relation too to be reinterpreted as a Locus. DeGuzman (ibid.:343-349) has provided numerous examples of transitive causative constructions in which such reinterpretation of CR's takes place.

However, I am not convinced that the downgraded AGT has to be reinterpreted as Correspondent. Conceptually, a downgraded AGT has become an intermediate or even an immediate cause of a potential action and would probably be more appropriately identified as a means or an instrument. Judging by DeGuzman's examples, this is a very plausible alternative since [+INS] does not ever appear once in either the source or derived case frames.

Thus, the following Tagalog examples from DeGuzman (cited by Starosta in Starosta 1978:550-551) can be reinterpreted as follows (the two pairs of examples corresponding to DeGuzman's examples 71a,b and 74a,b):

(3.171a) ibibigay ni Ruby ang Bibliya kay Lynn
give *Bible*
(Gen +AGT) (Nom +PAT) (Lcv +LOC)
the Bible will be given to Lynn by Ruby

(3.171b) ipapabigay ni Jim kay Ruby ang Bibliya kay Lynn
cause-to-give *Bible*
(Gen +AGT) (Lcv +INS) (Nom +PAT) (Lcv +LOC)
Jim will have Ruby give the Bible to Lynn

(3.172a) ibinalita niya sa nanay ang nangyari
relate *she* *mother* *happening*
(Gen +AGT) (Lcv +LOC) (Nom +PAT)
the happening was related to mother by her

(3.172b) ipinabalita ni Pepe sa kaniya sa nanay ang nangyari
cause-to-relate *her* *happening*
(Gen +AGT) (Lcv +INS) (Lcv +LOC) (Nom +PAT)
Pepe asked her to relate the happening to mother

The strongest objection to this analysis would be a formal one, that Tagalog non-nominative INS's are always marked by ng, not by sa. But note that the notion of means is expressed by a relator noun introduced by sa in sa pamamagitan ng NP *by means of* and the two notions can perhaps be associated.

Where case assignment is concerned, as long as the 1/Sent constraint is not violated by this reassignment, that is, by ending up with two [+INS] constituents within the same clause, there is sufficient syntactic and semantic similarity to warrant the subsuming of this particular function of Correspondent under INS. A saturated case frame will then contain the case relations PAT, AGT, LOC, and INS for DeGuzman's "Causative Ditransitive Information Verbs" (ibid.:346) as exemplified by ipinabalita *cause-to-relate* in sentence 3.172b above.

Another objection may come from the inertia bestowed by tradition to cling to the idea that the "indirect object" has to be a separate case relation. Like the notion of "subject", "indirect object" is to be thought of as a syncretism or neutralisation of a number of case relations which include, in Amis at least, LOC, INS, and perhaps PAT. Also, even though there are enough case relations to go around, the absence of an Experiencer is badly missed when it comes to epistemological verbs such as know and psychological verbs such as love. Somehow, even though we can assign AGT in the place of COR (or EXP, or DAT), these verbs do not seem to be notionally transitive. However, since we base our definition of transitivity on syntactic criteria, these verbs belong to the class of transitive verbs with both an AGT and a PAT in their case frames.

CHAPTER 4

AMIS CASE MARKING SYSTEM

As we have already mentioned in section 2.4.2, case relations are realised by case forms that are drawn from a universal set and form a separate parameter of case representation, mediating between and yet distinct from the universal set of case relations on the one hand and the language-specific case markers on the other.

The case-marking system of a language consists of classes of grammatically equivalent syntactic or morphological configurations that serve to signal the presence of particular case relations. These classes of configurations are the case forms. Since each language employs different syntactic and morphological configurations to realise their CR's, case-marking is language-specific.

It has also been indicated in section 2.4.2 that the pairing of CR's and CF's is not biunique and that each pair of CR-CF correlations can be manifested by a number of case markers. In this chapter, we will show how CF's and case paradigms can be analysed in terms of localistic features (sections 4.1 and 4.2) and present the CF-CR associations in Amis and their manifestations (section 4.3). In section 4.4, we will apply a localistic analysis to locative relator nouns that are used in Amis to indicate spatial orientation and direction.

4.1 Localism in Lexicase

Since John M. Anderson's proposal to incorporate localistic interpretation of case in a generative grammar in *The Grammar of Case* (1971), several doctoral dissertations in the Lexicase model have utilised localistic semantic features for further characterisation of case forms associated mainly with the realisation of the Locus case relation or its terminological equivalent (Li 1973:121-123; Kullavanijaya 1974:55-57). Clark (1978) has extended the use of "locative sub-case forms" — location, direction, extent, source, goal, and terminus — to the analysis of locative relator nouns as well as prepositions. Both Clark and DeGuzman (1978) have effectively utilised localistic semantic features for the subclassification of verbs. Acson (1979) applies localistic features to the analysis of both Classical and Modern Greek prepositions and nominal inflection, which together constitute the case-marking system. All these lexicase studies have demonstrated that Anderson's proposal is compatible with the lexicase framework.

In this dissertation case forms are represented by localistic semantic features on Determiners, Prepositions, and Pronouns. Some case forms are realised by a combination of preposition and determiner. Though Amis nouns other than pronouns are not overtly inflected for case, they are marked for both CF and CR for the subcategorisation of predicates which is dependent on the case features on their sisterheads. Since case forms are further specified by localistic features, they are in fact bundles of distinctive semantic features which are mostly directional and locational instead of being the basic features themselves. This is the reason why, in this study, abbreviations of case forms such as Nom(inative), Gen(itive), and Acc(usative) are not marked by a "+" or a "-" sign, the indicator of basic features. Nevertheless, these abbreviations are used in place of their corresponding feature bundles and are marked on nouns, determiners, and prepositions. Localistic features on verbs, however, are not replaceable by CF abbreviations even though the corresponding bundles may be present. This treatment is consistent with the convention once suggested by Starosta to distinguish the syntactic categories of Nouns (marked by both CF and CR), Prepositions (marked by CF alone), and Verbs (marked by neither a CF nor a CR) by the different requirements on case-feature specifications.

The Nominative case form is distinguished from the oblique case forms by a non-localistic feature [+nmtv]. Other non-localistic features used in the analysis of Amis case-marking system include [±prdc] (predicative), and [±cntr] (contrastive). [+prdc] marks the nominal predicates, both [+nmtv] and [-nmtv] ones, of NP-NP constructions. [+cntr] marks topics which occur in sentence-initial positions and has a constrastive meaning (see section 4.3.7: Neutral Case Forms). A feature tree for Amis case forms is given in section 4.3: Summary of Amis Case-Marking System below.

By Acson's account, the incorporation of localistic features in an analysis of case forms grows out of a revived interest in the works of Maximus Planudes, a thirteenth century grammarian (cf. Acson 1979:16). According to R.H. Robins, Maximus assigned to the three Greek oblique cases — the accusative, dative, and genitive — "an entire semantic field, namely relative location and movement, ... so that in its most basic distinction of approaching, static position, and separation it is exhaustively divided between them" (Robins 1972:108). This semantic field of relative location and movement is by no means restricted to the characterisation of case inflection on nouns. Depending on the language, various case-marking devices are used to express the notions implied by the case relations. As Fillmore has pointed out, case marking is not limited to the affixation or suppletion of nouns or pronouns (Fillmore 1968:21).

If the application of localistic semantic features to case-marking systems is theoretically significant, we should attempt to extend localisic feature analysis to such supplementary or alternative devices as the use of relator nouns, prepositions, postpositions, or other particles. It may even be possible to specify certain classes of verbs such as the location, motion, and transportation verbs with directional, orientational, or locational features, if such information is not already carried by one of the co-occurring nominal actants. See, for example, section 3.4.3.1 for a class of situationally motion verbs in Amis which would require such information to be marked on the verbs for subsequent semantic interpetation. These verbs are subcategorised accordingly in section 5.2.3.2 and 5.3.3.2.

4.2 Case Paradigm in Amis

Except for pronouns, Amis nouns do not overtly manifest case inflection. Instead, it is the prepositions and determiners that precede the nouns that reflect the case marking. In the present study, therefore, localistic feature analysis is applied to Pronouns, Prepositions, and Determiners, with Determiners established as a separate category distinct from Prepositions on the one hand and from Nouns on the other (see discussion in section 4.2.1 below). Amis nouns do not overtly reflect case inflection, but since they are referred to as sisterheads for the subcategorisation of the V's and P's, those features marked on Det's and Pronouns must be redundantly marked on the Nouns too.

It was mentioned that, except for pronouns, Amis nouns are not overtly inflected for case. However, the theory requires that case-form features be marked on all nouns, since the subclassification and selection of verbs depend on the case features of their sisterheads. Information carried by the head N of an NP construction should be consistent, if not identical, with that marked on its co-occurring P or Det. In the case of locative relator nouns (see section 4.4) and derived **-an** nouns, the head N actually carries more information about relative location, direction, and orientation than the more or less neutralised locative marker i.

4.2.1 Determiners

Determiner (Det) is a constituent of NP. In Amis, a Determiner always precedes every non-pronominal N and is never followed by a P within the same PP.

Determiners can be distinguished from Prepositions on four counts. First, a non-pronominal concrete Noun is always preceded by a Det. If a P and a Det co-occur in the same preposition phrase, it is expected that the P always precedes the Det. Secondly, some Determiners, specifically the Demonstratives, are derivationally related to nominal forms that can serve as heads of nominal constructions. Prepositions, on the other hand, tend to be derivationally related to verbs (cf. Clark 1978:267-287). Such differences in derivational potential keep the two categories apart even though the processes are not very productive for these closed categories. Thirdly, Determiners are inflected for case in Amis and show an inflectional paradigm for members of this class, whereas Prepositions show only one uninflected form for each lexical entry belonging to this class. Lastly, whereas most case relations such as Patient and Instrument are marked only by Determiners, there are at least two case relations that can be realised in the form of a PP, marked by a P followed by a Det if the head N is not a pronoun. These CR's are Locus with the Comitative CF and Place/Referent with the Benefactive CF. When the head N is a pronoun, P immediately precedes the N without an intervening Det.

The distinction between Prepositions and Determiners is obscured by the fact that sometimes it takes a P and a Det to jointly manifest a certain case form, such as the Comitative or the Benefactive in Amis. One is tempted to treat the combined form as a single lexical entry, but then it is difficult to decide what its syntactic class is. It is not a Det because it does not follow an inflectional paradigm; nor is it a P because we will not have, by this alternative, the obligatory Det before a non-pronominal N. Therefore,

we have accepted the solution that it is a combinatorial case marker, with two separate lexical items from two different syntactic categories jointly acting as the signal for the presence of a single case relation, or rather, a single CF-CR association (cf. Acson 1979 for the combinatorial case-marking systems of Classical and Modern Greek).

The inflectional paradigms of Determiners parallel that of personal pronouns in Amis (see section 4.2.3 below). In a sense, Determiners look like case inflectional prefixes on Nouns. Where supporting phonetic evidence is lacking, the distinction is indeed tenuous and it must be conceded that it is not without some degree of arbitrariness that we set up the grammatical category of Determiners apart from Nouns. The decision can perhaps be justified by the derivational relation that exists between forms like ia *the*, ina *this*, and ira *that* and nominalised forms such as ina-an *this place* and ira-ay *that one*. As inflectional affixes, ia, ina, and ira would not have the required independent status to engage in derivations. Also, historically ina *this* may have been developed from the relator noun ini *here* plus the ligature a while there has been no evidence that a would be attracted to a following noun to form a lexical unit. Forms parallel to ini and ina coexist synchronically in Amis, as the following pair of examples will show:

(4.1a) itini a niaroq *at this place*

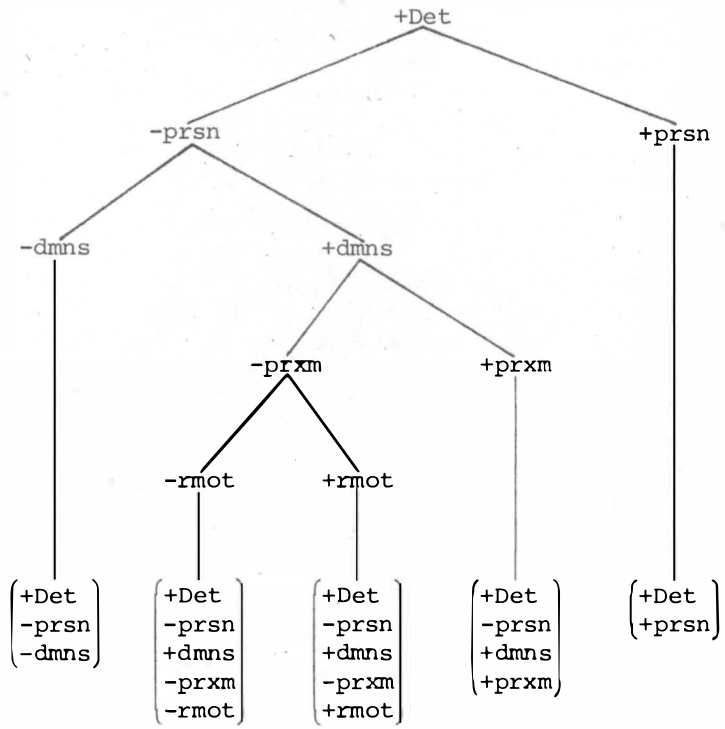
(4.1b) itina niaroq *at this place*

and it is easy to see how the second could have developed from the first. Even though such derivational potential or history does not conclusively determine the status of a form like itina as a Determiner as opposed to a nominal prefix, it does show that, at a certain point in time, itina and niaroq could be treated as two separate lexical entries, with the ligature a attracted to the preceding entry rather than the following one. These forms could very well be one step behind the pronouns which have already acquired case inflectional paradigms by incorporating case inflectional prefixes, as in itisoan *to you, with you* and nomako *of me, by me*.

Amis Determiners can be subcategorised by the features [±prsn] (personal), [±dmns] (demonstrative), [±prxm] (proximate) and [±rmot] (remote) as shown in the feature tree in Figure 4.1, with each Det fitting into the case inflectional paradigm at the bottom of the tree.

In Amis, the Genitive case form also marks non-subject Instruments, so there is no need for a separate Instrumental case form.

Personal pronouns and nouns are never marked by the Accusative case form, so there is a gap in the [+Det,+prsn] column in Figure 4.1, comparable to that in the paradigm for personal pronouns (see Figure 4.2 in section 4.2.3). Note also that the topic form of [+Det,+prsn] is ci and not i, perhaps to avoid homophony with the locative form of [+Det,-prsn,-dmns].



Topic	o	ia	ira	ina	ci
Nominative	ko	kia	kira	kina	ci
Genitive	no	nia	nira	nina	ni
Accusative	to	tia	tira	tina	--
Locative	i	itia	itira	itina	ici

Figure 4.1 Feature Tree and Inflectional Paradigm of Amis Determiners

4.2.2 Prepositions and Combinatorial Case Markers

Amis has a very small inventory of prepositions. The meanings of location, orientation, and direction as designated by such English prepositions as in, on, above, below, before, after, beside, between, etc. are in most cases not expressed by prepositions in Amis. Some of this functional load is shifted to relator nouns which are used extensively in Amis to express temporal and spatial orientation. The use of relator nouns has compensated for the lack of overt case inflection on nouns and the small size of the preposition inventory. Locative relator nouns in Amis are presented in section 4.4 below.

The remainder of the locational load is shifted to the verb system, which can also be characterised by localistic semantic features such as location, direction, source, and goal, like those on Tagalog verbs described in DeGuzman's analysis (1978:43, 181-187). This kind of division of labor is attested even in a language as rich in prepositions as English, where the function of a directional preposition phrase can shift to the verb, as illustrated by examples 4.2a and 4.2b below, taken from Bennett (1975:20):

(4.2a) The bridegroom has gone into the church.

(4.2b) The bridegroom entered the church.

The "goal" element which is realised in example 4.2a by a directional PP is expressed in example 4.2b partly by the transitive verb enter and partly by the NP, the church, and no directional PP is needed. Some Amis locational verbs resemble the English verb enter in that they do not require a co-occurring locative NP actant to represent "goal", "source", or "path". These situationally motion verbs are analysed as transitive verbs and are presented in section 3.4.3.1 as well as section 5.2.3.2 and 5.3.3.2.

Bennett (op. cit.:25) also gives examples in which the directional element can be shifted to the verb, thus neutralising the locative PP where directionality is concerned. Here are his examples:

(4.3a) The bridegroom has come to the church.

(4.3b) The bridegroom has arrived at the church.

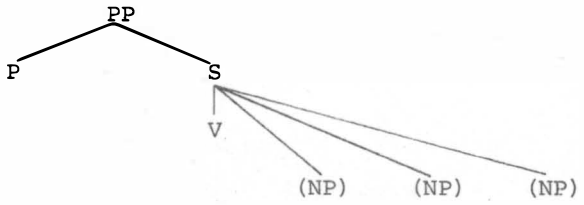
While the preposition to carries the "goal" reading, the preposition at does not. The "goal" element is actually expressed by the verb arrive instead. In Amis, the locative i does not give information on directionality either, so the functional load is on the motion verbs. Examples of Amis motion verbs with locative actants marked by a mere locative Det i are given in section 5.2.2 under verbal classification in Chapter 5.

Prepositions in Amis do not form an inflectional paradigm. As a first approximation, those that occur in construction with NP's and expressing the cas-like notions of goal, source, etc. are given in the following list with corresponding English glosses. We shall examine each of them in terms of function and distribution to determine whether or not they all belong to the Preposition class.

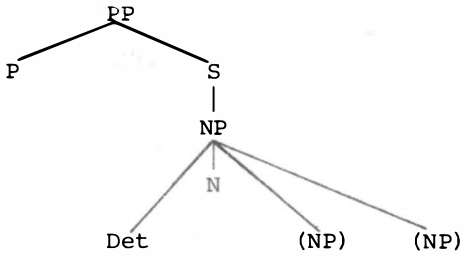
(4.4)			
	a	Comitative	*with*
	ato	Comitative	*with, and*
	namaka	Source	*from*
	saka	Benefactive	*for the sake of*
	tangasa	Goal	*up to, until*

In Amis, as in other languages, prepositional phrases are exocentric constructions with obligatory P and S, or with P and NP. The embedded S in turn can be realised as a verbal or a nominal clause construction. In the former case, the head of the construction is a verb and we call the embedded construction a verbal complement. The verbal complement consists of the head V which is non-finite and its co-occurring nominal actants, with the constraint that none of them can be expressed in the Nominative case form. In the latter case, the embedded S is an NP-NP construction. The subject of the embedded S, being co-referential with that of the higher verb, is usually unexpressed, thus giving rise to the nominal complement which is the NP after P in a preposition phrase. In both cases, we may refer to the embedded S's as infinitival clauses, with the reference of the missing complement governed by the next higher clause. Schematically, the two types of sentence complements after a Preposition can be expressed as the following two tree diagrams:

(4.5a) "Verbal" Complement

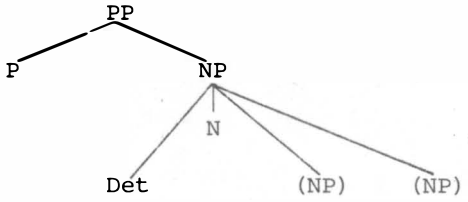


(4.5b) "Nominal" Complement



The embedded S in schema 4.5a is a sentence complement with a non-finite head V which may or may not have co-occurring NP's. The embedded S in schema 4.5b has a nominal head, which is a predicate nominative, but no subject NP. By referring to the $\overline{X}$ convention (cf. section 2.1) which imposes a constraint on lexicase grammars that every node of a tree must directly dominate at least one lexical head, we must revise 4.5b as follows:

(4.5c) "Nominal" Complement



While this is consistent with the model and its constraints, an analysis like 4.5c has lost the generalisation that, in Amis, all complements are in fact sentence complements. Also, it must be pointed out here that in the analysis of an NP-NP construction the same constraint has also been violated and for the time being there is no easy way to circumvent this inconsistency in the lexicase framework. Until that time we can solve the problem for NP-NP constructions as well, I am going to stick to the structural analysis of 4.5b instead of 4.5c because it can capture the generalisation about sentence complement.

Amis prepositions that can introduce a sentential complement which is a verbal construction include: a (positive ligature), ka (negative ligature), and na (indicating source or earlier event). Interesting as they are in their own right, they are not related to the manifestation of case forms in Amis and thus excluded from systematic discussions in this section.

In dealing with the Amis case-marking system, we are only interested in those prepositions that introduce sentence complements that have nominal predicates, in other words, those that fit into schema 4.5c. Structurally, the PP has the constituent structure of a P followed by an NP. The optional NP's in schema 4.5c above represent the nominal actants in the original case frame of the source V if the head N is derived from a V form. If the head N is not a deverbal N, a co-occurring NP can be the possessor of the head N.

With this initial understanding of the internal structures of PP and NP, in conjunction with a basic understanding of sentence complements and possessive attributes, we shall now return to our tentative list of Amis prepositions associated with the case-like notions of goal, source, etc. given above to see if its members are indeed prepositions.

There are four different a forms in Amis. One is the a form that introduces a sentence complement with a non-finite verb and gives it a reading of irrealis, potential, and future time as opposed to na which has a completive reading. It fits into schema 4.5a and is to be treated as a preposition. Examples are:

(4.6) ma-ngalay (a) [k-em-aen to piang] ko wawa
like, want *eat* *candy* *child*
[+V] [+P] [+V, -fint] [Acc, +PAT] [Nom, +PAT]
the child wants to eat candy

(4.7) ma-ngalay haw kiso a [k-em-aen to boting]?
like QM 2s *eat* *fish*
[+V] [Nom, +PAT] [+P] [+V, -fint] [Acc, +PAT]
do you like to eat fish?

(4.8) ah, dengay kiso a [si-maamaan] a [mi-bohat tia panan]
oh *can* 2s *use-something* *open* *door*
[+V] [Nom, +PAT] [+P] [+V, -fint] [+P] [+V, -fint] [Acc, +PAT]
oh, you can open the door with something

(4.9) aka (a) [pi-taes tia wawa]
don't *hit* *the* *child*
[+V] [+P] [+V] [Acc, +PAT]
don't hit the child

There is a tendency to drop a especially when the preceding word ends in a vowel or semivowel. The use of a to link the main verb or predicate to a sentence complement is quite common in Amis, as attested by the expressions involving the notions of Instrument, Place, Time, and Manner (see sections 3.3, 3.5, 3.6, and 3.7.1 respectively).

Another a form in Amis is a main verb. It belongs to the subclass of Auxiliary Verbs because it always requires a sentence complement. It implies future time. Examples include:

(4.10) a [icoa kako a [ma-lalitemoq iciraan]]?
shall *where* 1s *meet* 3s
[+V, +fint, +xlry, +futr] [Lcv] [Nom, +PAT] [+P] [+V, -fint] [Lcv, +LOC]
where should I meet him?

(4.11) a [caay ka [oradan]]
will *do-not* *rain*
[+V, +fint, +xlry, +futr] [+V, +fint, +xlry, +ngtv] [+P] [+V, -fint]
it isn't likely to rain

In Amis, tense is expressed by the tense verbs na (past tense) and a (future tense). Parallel to manner verbs, tense verbs are treated as heads of constructions with verbal complements. The ligature a is missing, probably as a result of elison with the previous vowel. Unlike other auxiliary verbs, however, the tense verbs take finite instead of infinite verbal complements. We shall return to the tense verbs in section 5.1.

The third a form is the ligature element in nominal compounds of the form N-a-N. Examples include:

(4.12) si-saqpaiqay-a-bali i sansandeb
have-a-cool-breeze *dusk*
[+V] [Lcv, +TIM]
there is a cool breeze at dusk

(4.13) ma-toas-ay a tamdaw
old-people *person*
[+N] [+N]
the elderly person

(4.14) anini a remiad
this *day*
[+P] [Neu]
this day, today

Intermediate between the compound form in 4.12 and a head-attribute NP construction with the head N linked to the attributive N by the preposition a without a Det, like 4.13 and 4.14, is the head-attribute construction involving a possessor, as in example 4.15.

(4.15) wawa no Kilang
child *Kilang*
[+Det] (Gen, +LOC)
Kilang's child

The fourth a form is the preposition a which bears the Comitative case form. It fits into schema 4.5c and the preposition is followed by an NP marked by the Accusative Det to for a non-personal head N or by ci if the head is a personal N. This preposition a and the determiner to or ci constitute the composite case markers for the Comitative case form. Through a reanalysis of a to, we get in Amis a new form ato which requires the co-occurrence of another Det in the following NP and is thus treated as a single lexical unit. Since the NP's linked by ato bear identical CF and CR, this new form is treated as a co-ordinating conjunction. The combinatorial case marker a to or a ci can be illustrated by the following examples:

(4.16) wina a to wawa
mother *child*
(+P, Com) [+Det] [Com]
mother and/with child

(4.17) kami a ci ina
lexcl *Mother*
(+P, Com) [+Det] [Com]
Mother and I
Lit. *we with Mother*

(4.18) ci Kilang a ci Adop
(+P, Com) [+Det] [Com]
Kilang and Adop

Regardless of the CR of the preceding NP, a to and a ci in examples 4.16-4.18 do not change their form. In the following example, however, the Det after ato agrees with that of the preceding NP. This shows that ato, unlike the preposition a, is a co-ordinating conjunction.

(4.19) ni Kilang ato ni Adop
and
(Gen, +AGT) [+conj] (Gen, +AGT)
by Kilang and Adop

The two NP's in 4.19 can also be analysed as [Gen,+LOC]. In that case they are two co-ordinated possessors of the head N.

We shall have more examples of nominal complements in section 4.3.7.3 below and the reader should refer back to section 3.7.3 for the Amis way of expressing the case-like notion of Concomitant or Comitative.

To sum up, there are two prepositions a, only one of which is marked by a case form, [Com] (Comitative). The form ato is not a preposition. It is the reanalysis of the combinatorial case marker a to.

The form tangasa is a verb in Amis. According to my data, tangasa can be used as a main V as well as a non-finite V in an embedded S. Examples given below show tangasa used as a finite V as well as a non-finite V. The non-finite form probably lends itself more readily to a preposition analysis because of its word order that corresponds to that of an expression involving a PP in English, its English translation, and the absence of a co-occurring P before the embedded S. If we look at the class of motion verbs in Amis (see sections 5.1 and 5.2), we would find that ta-ngasa has the characteristic prefix ta- of motion verbs and that, when motion verbs are used as non-finite heads of embedded constructions, they are not preceded by prepositions. Therefore, ta-ngasa is a verb and not a preposition. The following examples show ta-ngasa used both as a main verb and as a non-finite verb in a sentence complement.

(4.23a) ta-ngasa cira i panan a [mi-dakaw]
go-up-to 3s *gate* *ride*
(+V, +fint) (Nom, +PAT) (Lcv, +LOC) [+P] (+V, -fint)
he rode up to the gate

(4.23b) mi-dakaw cira [ta-ngasa] i panan
ride 3s *go-up-to* *gate*
(+V, +fint) (Nom, +PAT) (+V, -fint) (Lcv, +LOC)
he rode up to the gate

(4.24) hacoa ko tenes no codad a [ta-ngasa i Taihoku]?
how much *length* *letter* *arrive* *Taipei*
[Neu] (Nom, +PAT) (+V, -fint) (Japanese loan) (Lcv, +LOC)
how long does it take a letter to get to Taipei?

The form namaka is also associated with verb forms. In fact, it should be reanalysed as a main verb na and a verbal prefix maka-, which derives verbs with an implied source from nouns that refer to location or place, on the non-finite verb. The following examples show maka-N verbs used both as finite verb or as non-finite verb of an embedded S:

(4.25) maka-raay cira a [r-em-akat]
come-from-afar ls *walk*
(+V, +fint, +sorc) (Nom, +PAT) +P (+V, -fint)
he walked (here) from afar

(4.26) ma-rebahoy ko qayam na [maka-badahong] [tara-lotok]
fly *bird* *go-from-roof* *go-to-mountain*
(+V, +fint) (Nom, +PAT) +P (+V, -fint, +sorc) (+V, -fint, +goal)
the bird flew from the roof to the mountain
(Starosta 1974:308, M121; my reanalysis)

As non-finite verb in an embedded S, maka-N verbs are usually preceded by the auxiliary verb na which indicates past time. When the expression of notional source or origin follows another verb, the subordinate clause shows na maka-N in its predicate. In the present system of analysis, the auxiliary verb na is reinterpreted as a preposition that introduces the sentence complement with maka-N verb as its head. However, I do not rule out the possibility of na and maka-N developing into a unit preposition *namaka *from* plus a N, similar to the way a and si- may suggest a unit preposition *asi *with* plus a N (cf. section 3.3.3.2.2). At the present stage, the language is not ready for this reinterpretation because the N following a preposition is expected to be preceded by a Det. The relationship between coverbs and prepositions in Vietnamese has received a thorough treatment in Clark (1978:267-287) and this topic certainly merits further study with Formosan languages.

The last candidate from list 4.4 above to be considered a preposition is saka. Since this form combines with the Det i to mark the Benefactive case form, it is tempting to take *sakay as a single unit. But this is not the solution adopted here because I am unwilling to make the concession that a non-pronominal N after *sakay does not require a co-occurring Det, nor am I ready to call *sakay a Det itself because it does not fit into the paradigms presented in section 4.2.1 above. I have instead analysed it into two units, the preposition saka and the Det i, to be consistent with our assumption that all concrete non-pronominal nouns in Amis are to be preceded by a Det.

From the tentative list given earlier in this section, we have eliminated all but two as members of the Preposition category, which are also involved in the case-marking system of Amis. They are the Comitative a to or a ci and the Benefactive saka which co-occurs with an NP in the Locative case form.

4.2.3 Pronouns

In Amis, within the Noun category, only Pronouns are inflected for case, with "case" figuratively referring to those forms which "fall away" from the Nominative (cf. Acson 1979:15). Non-Nominative cases are also referred to as the "oblique cases", and they are analysable in terms of directional and locational features within a localistic framework. The syntactical and semantical categories that exhaustively divide the semantic field of relative location and movement among the five "oblique" cases for Amis personal pronouns are: [±drcn] (directional), [±sorc] (source), [±goal] (goal) and [±assn] (association), giving us the feature tree in Figure 4.2 which is part of the composite tree in Figure 4.6 of section 4.3 below.

Of the five "oblique" case forms, Com and Ben are combinatorial case forms realised by a Preposition and an inflected pronoun, or a non-pronominal N with an inflected Det. With personal pronouns, the Ben case form is realised by the preposition saka followed by a pronoun in the Lcv case form, such as saka itakoan *for me*. As for the Com case form, there are no instances of the preposition a immediately followed by an inflected pronoun. This can be a systematic gap rather than a data gap (see section 4.3.5).

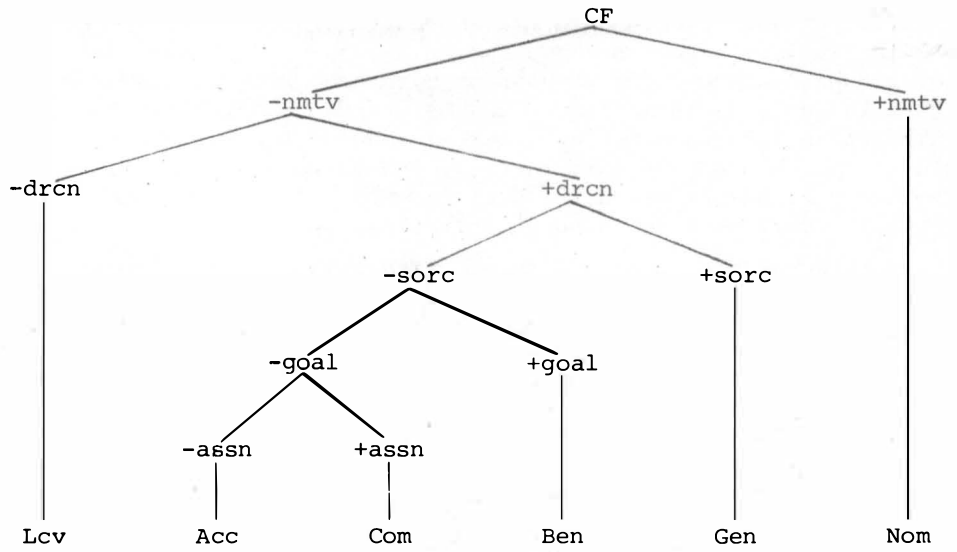
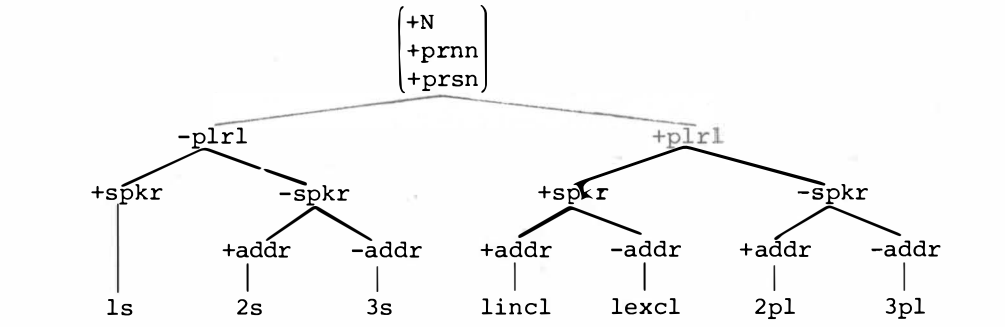


Figure 4.2 Localistic Analysis of Amis Case Forms

Amis Personal Pronouns can be subcategorised by the features [±plrl] (plural), [±spkr] (speaker), and [±addr] (addressee) as shown in the feature tree in Figure 4.3 with each personal pronoun in the system fitting into the case inflectional paradigm at the bottom of the tree. The Nom and Top forms are also included in the paradigm. In the tree diagram, some of the + and - features are reversed in order to yield a matrix with the first, second, and third persons coming out in the right sequence.



Top	ako	iso	cira	ita	ami	amo	ohni
Nom	kako	kiso	cira	kita	kami	kamo	kohni
Gen	nako	niso	nira	mita	niam	namo	nohni
	nomako	nomiso		nomita	niniam		
	ako	iso		ita		amo	ohni
Acc	---	---	---	---	---	---	---
Lcv	itakoan	itisoan	iciraan	itamian	ititaan	itamoan	itohnian

Figure 4.3 Amis Personal Pronouns

Nominative personal pronouns in Amis have a k- formative which is also found in the nominative Det's such as ko and kina. As Topic or as nominal predicate of an equational sentence, the pronoun stem is used with no affixation. We can say that it has a ∅- formative. The only exception lies in the third person singular where cira does not show a k- formative for Nom nor is it differentiated for Nom and Top. Historically, the third person pronouns in Austronesian languages are derived from demonstrative pronouns. In Amis, cira is formally related to the demonstrative ira.

Genitive personal pronouns show three different patterns of realisation. In general, we can say that the presence of an n- formative manifests the Genitive case form. This is also true for Genitive Determiners such as no and nina. We may recall from section 3.2.3 that in Amis the Genitive case form is used for non-subject Agent or Instrument as well as for the possessor of a possessed N. Possessive pronouns serving as attribute to a head N which is concrete have the option of taking the shorter forms with the n- formative left out. The shorter forms — ako, iso, ita, amo, and ohni (not a complete paradigm) are considered clitic pronouns because, even though their attachment to the N does not result in a shift in stress position, nothing is allowed to intervene between the head N and the short form of a possessive pronoun. A Genitive Agent is never realised in the short clitic form. Intermediate between the fullest and clitic forms is a set of Genitive pronoun forms that can be used as either a possessor or a Genitive Agent. They are shorter than "full" and, except for the first person inclusive form mita, still keep the n- formative. It must be pointed out that though these intermediate forms form a complete paradigm, they are not as popular as the fuller forms when it comes to Genitive Agents. Whenever the fullest forms such as nomako and nomita are available, it is considered "good style" to use them. The use of a corresponding intermediate form such as nako and mita would be considered "sloppy speech" by my informants though they use them often enough in their own speech. For possessive pronouns, all variant forms, up to as many as three, can be used interchangeably.

In Figure 4.3, I have, for comparative purposes, included the five points Reid (1978:11) uses to characterise determiner and pronoun systems, namely, Topic (Top), Nominative (Nom), Genitive (Gen), Accusative (Acc), and Locative (Lcv), but it must be pointed out that, in Amis, personal pronouns do not have Accusative case forms. In section 3.1.3 above, we have already mentioned that a notional Patient is always reinterpreted as a Locus if its referent is a pronoun, thus intransitivising a transitive verb with Accusative Patient. We shall return to this point in section 4.3.6 and 6.3.2 below.

Since Amis personal pronouns do not have Accusative case forms, translational equivalents of English "direct" and "indirect" objects can both be realised in the Locative case form.

Amis Locative personal pronouns have three formatives added to the stem: an i- prefix, an -an suffix, and a t- formative which corresponds to that found in Accusative determiners such as to and tina that co-occur with common nouns.

It is pointed out by Schachter and Otanes (1972:138) that the English "self/selves" formations have two different uses: (1) reflexive, as in I hurt myself, and (2) intensive, as in I went myself. Like Tagalog, Amis uses different constructions to express the reflexive and the intensive.

The Amis equivalent of English reflexive pronouns takes the form of an attributive NP construction, the head of the construction being the N tireng meaning *body*. The attribute is a Genitive pronoun. Examples include:

(4.27a) pi-sinanot-i to tireng nomiso
care-for *body* 2s
[+V] (Acc, +PAT)
take care of yourself
Lit. *take care of your body/health*

(4.27b) ma-ngalay kako a [pa-kakapah to tireng ako]
want ls *make-good* *body* ls
[+V] (Nom, +PAT) [+P] (+V, -fint) (Acc, +PAT)
I want to make myself healthy
Lit. *I want to make my body healthy*

The Amis equivalent of English intensive pronouns also takes the form of set idioms with the pronoun stem linked to its corresponding Genitive form by a ligature to, as in the following examples:

(4.28a) ohni to nohni *they themselves*

(4.28b) amo to namo *you (pl.) yourselves*

(4.28c) ako to nomako *I myself*

These attributive constructions are used for intensifying and emphatic purposes. For this reason, they are usually found in the topic position preceding the verbal predicate. Examples are:

(4.29) solinay, ohni-to-nohni, ma-tama to ko balocoq
indeed *they-themselves* *contented* *heart*
[+Adv] (Top, +emph) [+V] (+Adv, +spct, +inch) (Nom, +PAT)
indeed, they (their heart) will be contented

(4.30) ako-to-nomako, caay aca ka [k-em-aen to qepah]
I-myself *not* *ever* *take, eat* *wine*
(Top, +emph) [+V] [+Adv] [+P] (+V, -fint) (Acc, +PAT)
as for me myself, I don't drink

Interrogative personal pronouns in Amis also form a partial case paradigm. Impersonal ones corresponding to English question words where, when, how many, how much, what, and which are not overtly inflected for case. They are also listed in Figure 4.4 below.

	CASE FORM	AMIS EXPRESSION	ENGLISH GLOSSARY
PERSONAL	Nom/Neu	cima	*who, whom*
	Gen	nima	*whose, by whom*
	Lcv	icimaan	*to whom, with whom*
	Ben	saka icimaanan	*for whom*
IMPERSONAL	Neu	icoa	*where*
	Neu	hacoa	*how much, how many*
	Neu	pina	*how many*
	Lcv	(i) hacoa ko toke	*(at) what time, when*
	Lcv	(i) pinaay ko toke	*(at) what time, when*
	Neu	o maan	*what*
	Neu	o icoaan	*which one*

Figure 4.4 Amis Interrogative Pronouns

The first four interrogative pronouns fall into a paradigm corresponding to that of the other personal pronouns in Amis (see Figure 4.3).

As a matter of fact, the interrogative expressions corresponding to the English *(at) what time* or *when* are not pronouns. In the expressions given above, hacoa and pinaay are nominal predicates indicating quantity or extent of the quality expressed by the subject NP, which, in this case, is toke *time*. Both hacoa and pinaay require a sentence complement with a head V which indicates an action or a process for which a time referent is overtly expressed (see section 3.7.2).

Indefinite pronouns in Amis are derived from interrogative pronouns through reduplication or attribution. Correspondences between interrogative and indefinite pronouns are given in the following:

INTERROGATIVE PRONOUNS AND EXPRESSIONS	INDEFINITE PRONOUNS AND EXPRESSIONS
cima *who*	cimacima *someone, anyone*
o maan *what*	o maamaan *something*
icoa *where*	icoacoa *somewhere*
	ano icoacoa *whenever*
	o icoaan a toke *sometime*
	o icoaan a remiad *some day*
maan sa *how*	o maamaan (sa) *somehow*

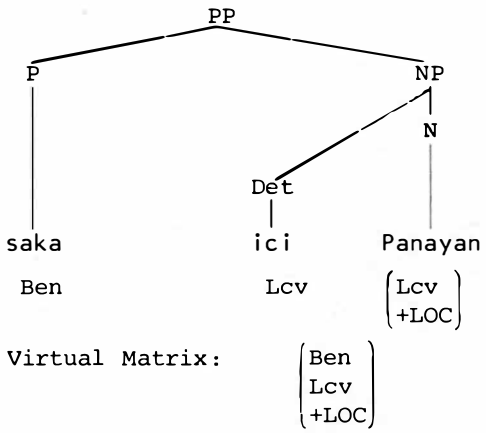
Figure 4.5 Correspondence between Interrogative and Indefinite Pronouns

4.3 Summary of Amis Case-Marking System

The system for marking case relations in Amis involves the use of case-marking determiners and prepositions. Pronouns are permanently marked for their individual case forms. As stated previously, case forms are represented as bundles of distinctive lexical features, mostly localistic semantic features on Nouns, Prepositions, and Determiners. It is to be understood that in the present study case forms are not unit features; rather, they are cover labels that correspond to several features that jointly characterise a particular case form. There are six such case forms: the Nominative (Nom), Genitive (Gen), Accusative (Acc), Locative (Lcv), Comitative (Com), and Benefactive (Ben). The first four case forms are realised by determiners [+Det] and the remaining two by prepositions [+P] in conjunction with a determiner.

The combinatorial case marker, with a preposition and a determiner each carrying a case form (i.e., a bundle of localistic features) in a prepositional phrase does not pose any difficulty in identifying the case form of the entire constituent. The case form of a prepositional phrase is the virtual matrix combining the features of the preposition and the Det, while the case relation is the case relation of the head N of its sister NP. Prepositions are unmarked for case relation. The combinatorial CF approach is similar to that used by Veneeta Acson (1979). My CR assignment, however, differs from previous lexicase works such as DeGuzman (1978) because I use established CR's instead of creating new ones to correspond with the Comitative or the Benefactive CF's. The marking of CF and CR on a PP can be illustrated by the following example:

(4.31)



for the sake of Panay

The case-marking system of Amis can be summarily presented in the composite tree in Figure 4.6, with the features applicable to both personal and non-personal nouns including pronouns. The features used are: [±nmtv] (nominative), [±cntr] (contrastive), [±drcn] (directional), [±sorc] (source), [±goal] (goal), and [±assn] (association), and [±prdc] (predicative). Strictly speaking, [±prdc] is not a CF feature. It is included in the feature tree because it can mark both semantic and syntactic differences between some CF's and their corresponding predicative use.

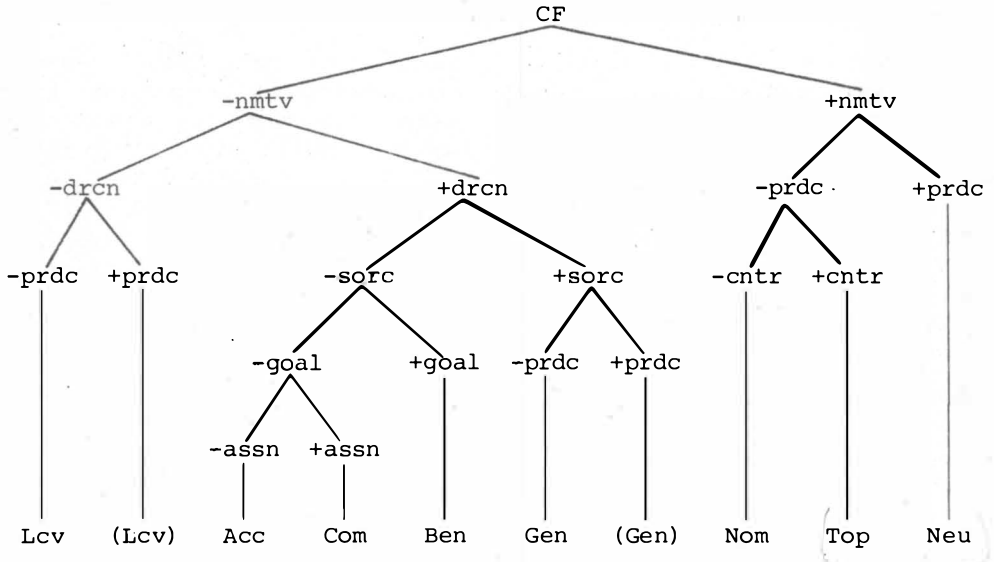


Figure 4.6 Composite Feature Tree for Amis Case Forms

Of these case forms, only Com and Ben are realised by a combinatorial case marker consisting of a preposition and a determiner or a pronoun. The others are all marked by only a determiner with non-pronominal nouns or by the pronoun forms themselves.

For convenience and readability, and to facilitate universal comparisons, some traditional labels for case forms are used in the place of the feature matrices expanded from Figure 4.2. In fact, all but Neu are traditional labels in case grammar literature. With the exception of Top(ic) and Neu(tral), all the names end in *-ive*, a convention Harmon sets up for naming case forms in lexicase. I could have followed Harmon (1977:67) in referring to the topic as the Contrastive case form but I have chosen Topic instead, because the latter is a widely recognised and established term in the literature. As for Neutral, it could have been called Predicative or Descriptive to be consistent with Harmon's convention, but then it might be misleading because there are the predicative locative and predicative genitive forms that are descriptive predicates as well.

In the following are correspondences between the convenient cover labels and the feature representations of the case forms. Note that I have not devised new names for the predicative Locative and Genitive forms.

Neutral (Neu):	[+nmtv,+prdc]
Topic (Top):	[+nmtv,-prdc,+cntr]
Nominative (Nom):	[+nmtv,-prdc,-cntr]
Genitive (Gen):	[-nmtv,+drcn,+sorc]
Locative (Lcv):	[-nmtv,-drcn]
Accusative (Acc):	[-nmtv,+drcn,-sorc,-goal,-assn]
Comitative (Com):	[-nmtv,+drcn,-sorc,-goal,+assn]
Benefactive (Ben):	[-nmtv,+drcn,-sorc,+goal]

The features are marked on Prepositions, Determiners, or Nouns. Specifically, Ben and Com are marked on P's, while all others are marked on either pronouns or on both the Det and the non-pronominal head H of an NP.

Correspondences between CF's and CR's in Amis can be summarised in the following table:

CF \ CR	PAT	AGT	INS	LOC	PLC	TIM
Topic	+	+				
Nominative	+	+	+	?		
Genitive		+	+	(+)		
Accusative	+	(+)	+			+
Locative				+	+	+
Comitative	(+)	(+)	(+)			
Benefactive				+	?	

Figure 4.7 Summary of Amis CF-CR Correspondences

Genitive Locus is placed in parentheses because it is used only to mark the possessor of a possessed noun. Also, Accusative Agent is placed in parentheses because it is only used jointly with the Comitative case form. The status of Nominative Locus cannot be decided on the basis of only one example (see section 3.4.2.2).

In section 3.7.3 and section 4.2.2, we presented the Comitative case form as a composite form consisting of the preposition a and an inflected determiner, ci with personal nouns and to with non-personal nouns. The case form assigned to these nouns is Com, though with to one may add Acc to the CF assignment. As for CR assignment, one may note that in all the examples given in sections 3.7.3 and 4.2.2 the nouns following a to or a ci have not been assigned any case relations. As the detailed analysis of sentence 3.170 shows, the NP following the preposition a is a nominal complement of the head noun, hence not a sister constituent of the main verb, and is therefore not required to be marked for CR. If we insist that all nouns are to be marked for both CF and CR and, if we think that attributive nouns are co-referential with their head nouns, then we look to the head nouns for our solution. In examples 3.166a and 3.170, the CR of the head noun is PAT. With examples 4.16-4.18, the most likely candidate is PAT, but AGT and INS are also possible because all these CR's can be realised in the Nominative case form and are compatible with the Accusative case form manifested by the Det to. See also the summary statement in section 4.3.3.4 below.

The Topic form will be discussed in section 4.3.7.1 below, to be immediately followed by discussions on nominal predicates (section 4.3.7.2) and nominal complements (section 4.3.7.3), after we deal with the six distinct case forms in six ensuing sections. These CF's in fact have already been introduced in the various sections dealing with the realisations of CR's, so their presentation here is meant to be a recapitulation from a different perspective.

4.3.1 The Nominative Case Form (Nom)

In general the Nominative case form (Nom) corresponds to the subject of the sentence. Except with a small number of verbs which include meteorological, ambient, and impersonal verbs, every simple sentence has one, and only one CR realised in the nominative case form. This co-occurrence restriction can be stated as the following redundancy rule involving the feature [+nmtv]:

(4.32) [+nmtv] → [-[+nmtv]]

This rule utilises the feature [+nmtv] instead of the Nominative CF so as to generalise over the Topic form which, if it corresponds to the subject of the sentence, is redundantly marked [+nmtv]. A sentence may contain a Topic and a subject, but not when both are marked by the feature [+nmtv]. Unlike the oblique case forms characterised by the feature [-nmtv], a Nominative or a Topic case form is not further analysed by localistic features.

The Nominative case form in Amis is marked by Determiners with a k- element, i.e., ko, kia, kira, and kina, if the actant is a common or an abstract noun; by ci if the actant is a single personal name; and by ca if the personal name has a plural meaning, like the Smiths in English. Except for the third person singular cira, pronouns in the nominative case form also show a k- element. The Nominative pronouns are: kako, kiso, cira, kami, kita, kamo, and kohni. Here I would only mention in passing that the third person singular personal pronoun cira might have developed from *ci ira meaning *the one over there*. The presence of k- in most of the pronouns and determiners is clearly an indicator of the Nominative CF, but since our grammar deals with lexical entries or words, no more and no less, morphological pieces like k- are of little interest to the syntax except when we deal with the derivation of lexical entries from one syntactic subclass to another.

It is pointed out by DeGuzman (1978:72-74) that, in Tagalog at least, even though CR's are in many instances neutralised by the CF's, the identity of the CR of the subject NP is always recoverable through the affix marking of the verb. The affix markings on the verbs that preserve information about the CR's neutralised by the Nominative case form are referred to as voice or the focus system. While Tagalog has a full verb inflection paradigm associated with Nominative Agent, Patient, Instrument, etc., the Amis language permits only the Patient and the Agent to participate actively in the Nominative case form. Instances of Nominative Instrument and Nominative Locus are rare and I have yet to find any instances of Nominative Time or Place in my Amis data.

4.3.1.1 Nominative Patient

Being the fundamental case relation, the Patient case relation is often found to be the only CR in the case frame of a verb and in the Nominative case form.

In section 3.1.1, we have pointed out that all intransitive verbs have a Patient subject, if they have a subject at all. With the ergative transitive subclass of verbs, it is always the Patient that is realised in the Nominative case form, co-occurring with the uninflected verb stem. There are also subclasses of verbs such as the subclass of verbs with implied instruments, i.e., the si-N verbs and the N-en verbs, which require Patient subjects. By lexicase convention, the subject of an NP-NP construction always bears the

Patient case relation, thus contributing generously to the pool of Nominative Patients. Examples are abundant in my data and many are cited in sections 3.1.2.1 and 3.1.2.2 when we presented the Patient case relation.

4.3.1.2 Nominative Agent

In section 3.2.2 we have already pointed out that Agent actants typically co-occur with transitive verbs, and that with the accusative transitive subclass of verbs, the Agent is normally realised in the Nominative case form. In fact, Agent is at the top of the accusative Subject Choice Hierarchy. Though notionally there can be animate and inanimate Agents (see discussion in section 3.2.1), all instances of Nominative Agent that I have in my data are animate.

An Agent always co-occurs with a Patient. If the Agent is realised in the Nominative, the Patient is realised in the Accusative case form if it is a specific notional object. Examples can be found in sections 3.2.2.1 and 3.1.3.1 above.

4.3.1.3 Nominative Instrument

In section 3.3.2.1, we have mentioned that verbs with Instrument subjects are secondary forms. There is no consistent verbal affix that we can use to characterise this subclass. As examples 3.56 and 3.57a of section 3.3.2.1 may show, the case relation of the subject NP cannot be uniquely determined by referring to the affix marking on the verbs. In these examples, both verbs are marked by the prefix sa-pi-, but one has Nominative Instrument while the other has Nominative Patient instead. All we can say is that the affix forms sa-pa-, mami-, and sa-pi- are indicative of the notion of instrument. In the presence of an Accusative Patient, the Nominative NP can be assigned the Instrument case relation. Otherwise, the Nominative NP would be assigned the basic case relation, which is the Patient.

Verbs with implied instruments take Patient subjects and not Instrument subjects.

4.3.1.4 Nominative Locus

In section 3.4.2.2, we have given the only example we have in my Amis data that shows a Locus subject. It is difficult to tell on the basis of a single instance whether the affix marking on the verb is characteristic of a subclass of verbs that take Locus subject, even though the prefix sa- suggests the meaning of "purpose" and the suffix -an indicates a location.

4.3.1.5 Affix Marking on Verbs

Even though the Amis language does not show a verb inflectional paradigm and has in the majority of cases only Patient or Agent subjects, the CR of the subject in Amis is still recoverable from the verb form. The verbal affixes

and the case frames are in a way mutually definable. Since a verb class is characterised by its case frame and implicational relations between CR's and CF's, given a characteristic verb form, we should be able to recover those CR's that may get camouflaged by a particular CF, expecially the Nominative. For example, given the characteristic verbal affix ma-, we know that it either marks intransitive verbs that have only one obligatory co-occurring actant which is necessarily the Patient and the subject or signals ergative transitive verbs with nominative Patient and genitive Agent. With the characteristic verbal affix -en, we know that it marks ergative "passive" transitive verbs and that the subject is necessarily a Patient if the case frame consists of two actants, one marked by Nominative and the other, Genitive. With the characteristic verbal affix mi-, on the other hand, we can assume that it marks accusative transitive verbs and that the subject of the unmarked form is not a Patient. While the subject can be either an Agent or an Instrument, the Patient is realised in the Accusative case form and is to be interpreted as non-specific (see section 3.1.3.1).

As for those verbs that take an Instrument or Locus subject, there are also morphological cues leading to the identification of the subject CR. As our examples in sections 3.3.2.1 and 3.4.2.2 may show, the affix marking on the verbs together with the presence or absence of an Accusative case form can unambiguously determine the CR on the Nominative constituent. Since there is no characteristic marking on the verb to uniquely identify the CR of the subject constituent in these cases, we must say that Amis does not have a fully developed voice inflection or focus system as a Philippine-type language like Tagalog or Maranao may have.

4.3.2 The Genitive Case Form (Gen)

Typically, an ergative transitive verb has a Patient subject and a co-occurring Agent or Instrument realised in the Genitive case form.

A localistic feature analysis yields the following minimal characterisation for the Genitive case form: [+drcn,+sorc]. If it functions as a nominal predicate, we may add the additional features [+prdc,-idnt] to distinguish it from the non-predicative use on the one hand, and from the Neu form that is [+idnt] (identificational) on the other.

The Genitive case form in Amis is marked by Determiners with an n- element, i.e., no, nia, nira, and nina if the actant is a common noun, by ni if the actant is a singular personal name, and by na if the personal name has a plural meaning, like of/by the Smiths in English. Pronouns in the Genitive case form also show the n- element, as in nomako, nomiso, nira, noniam, nomita, and nohni. We can say that the presence of n- manifests the Genitive case form.

The Genitive CF also marks descriptive nominal predicates that indicate possession. By lexicase convention, nominal predicates are not marked by CR's. Only CF's are required in the feature matrices of nominal predicates. In Figure 4.3, we have listed three alternate sets of Genitive pronouns. Only the long forms can be used as nominal predicates and Genitive Agents, while it is permissible for members from all three sets to appear as nominal attributes in the capacity of possessors. Genitive nominal attributes are marked by the features [Gen,+LOC] because conceptually the source implicit in the Genitive CF represents a Locus.

4.3.2.1 Genitive Agent

Typically, Genitive Agents co-occur with ergative transitive verbs marked by the suffix -en or by the prefix ma-, as shown by the examples given in section 3.2.2.2 above. Since a Genitive Agent is marked in the same way as a possessive attribute, there is structural ambiguity when a genitive NP follows another NP in a verbal construction with an ergative head. Since Amis allows for free ordering of nominal actants, it is possible for a Genitive Agent to come after an NP with which it has no sister relation. Due to the existence of some co-occurrence restrictions between pronouns and non-pronouns within a complex NP, certain combinations of pronoun and non-pronominal constituents may have only one reading, with the head-attribute, or possessed-possessor, reading ruled out. Examples 3.46a-3.46e in section 3.2.3.1 serve to illustrate this point rather clearly.

The similarity between a Genitive Agent and a possessor makes it difficult to determine the syntactic category of some derived nouns and secondarily derived verbs. Given a form like sa-pi-angang, followed by the genitive form nomako, it is not easy to tell whether to interpret sa-pi-angang as a possessed noun or as an ergative verb with a co-occurring Genitive AGent. Since I have set up the stringent constraint that all common and abstract nouns, derived or underived, would have to be preceded by a Det, forms like sa-pi-angang that are not preceded by a Det would be analysed as verbs. Except for the case of numerals, this assumption seems to work very well in distinguishing between nouns and verbs.

4.3.2.2 Genitive Instrument

Typically Genitive Instruments co-occur with ergative transitive verbs. Referring to section 3.3.2.2, we notice that, like Nominative Instrument, the occurrence of Genitive Instrument is limited to only a few examples. While examples like 3.61 and 3.62 establish the need for this category, the constituents marked as Genitive Instrument in examples 3.59 and 3.60 can very well be reanalysed as Genitive Agent had Starosta not insisted on the criterion of "immediacy" in the chain of cause and control. Unfortunately, there is no formal syntactic distinction between a Genitive Agent and a Genitive Instrument in Amis to strengthen our position.

4.3.2.3 Genitive Locus

Genitive Locus is the characterisation we can give to an attributive possessor. An attributive possessor does not really need to be marked by a CR. In previous lexicase studies, however, a Correspondent CR has been assigned to the possessor so as to parallel the analysis that the subject of a verb of possession is an experiencer, or a correspondent (cf. Fagan 1979:150). In Figure 4.6, Genitive Locus is placed in parentheses because this CF-CR correspondence is not a part of the case frame that can serve to subcategorise verbs and I am still not convinced that the assignment of a CR to the possessor is necessary.

4.3.3 The Accusative Case Form (Acc)

The Accusative case form in Amis can realise the Patient, the Instrument, and the Time case relations. When following a Comitative preposition a, the Accusative case form can be matched with the Patient, the Agent, or the Instrument case relation.

The Accusative case form is typically manifested by the accusative case marking with a t- formative in the determiners for non-personal nouns. Personal names, like personal pronouns, do not have Accusative case forms. Notional direct objects are manifested in the Locative case form.

4.3.3.1 Accusative Patient

As has been discussed in sections 3.1.3.1 and 3.4.3.4, the Patient case relation realised in the Accusative case form has a referent which is a notional object marked by the features [-prnn,-prsn]. If the notional object is [+prnn] or [+prsn], then it is manifested as a Locative Locus instead. If the notional object is [-prnn,-prsn] but [+lctn], then its manifestation fluctuates between the Accusative and Locative. This full spectrum of possible combinations in terms of features and forms is very interesting. Normally one would expect a location noun to be preceded by a locative determiner and not by an accusative determiner, but the pattern is there. Also, when comparing Amis with other western Austronesian languages such as Tagalog (cf. DeGuzman 1978:36-38), one would expect the Accusative to mark only the indefinite Patient while definite Patients are left for the Locative case form. As Figure 3.1 shows, this is not the case. Except for the Det to, all other Accusative Determiners also mark definite Patients.

Examples of Accusative Patients can be found in section 3.1.2 2 under Accusative Patient, in section 3.2.2.1 under Nominative Agent, in section 3.3.2.1 under Nominative Instrument, in section 3.4.2.1 in conjunction with the discussion on Locus-focus in Amis, and in section 3.1.3.1 on non-specific object transitive verbs.

4.3.3.2 Accusative Instrument

In section 3.3.2.1 we have demonstrated the feasibility of extending the Instrument case relation to cover the notion of means in Amis. What can be notionally interpreted as a "trajectory of the action impinging on the PAT" (Starosta to appear a:1) or an "intermediate" cause is realised syntactically and morphologically as the Accusative Instrument. Since Accusative Instrument is not found to be co-occurring with Nominative Instrument or Genitive Instrument within the same clause, there is no danger of violating the 1/Sent constraint.

4.3.3.3 Accusative Time

In section 3.6.2.2, we have given many examples of the Time case relation realised in the Accusative case form. While Locative Time may enjoy a freer word order and may appear before the head of a verbal or NP-NP construction,

Accusative Time always occurs post-verbally, coming even after the subject NP. As the examples also show, the marking of Accusative Time is not limited to the Det to, though it is the most popular form.

4.3.3.4 Accusative Agent

The Comitative case form in Amis as marked on the Preposition a requires a sister NP in the Accusative case form. As the argument in sections 3.7.3, 4.2.2, and 4.3 goes, the entire PP is to be treated as a sister of the head V of the construction and not as subordinated under the head N of an NP. Evidence in support of this analysis comes chiefly from positional variation of the Accusative constituent.

Where CR assignment is concerned, the NP which is a sister of the Comitative preposition a normally agrees in CR with the Nominative NP. Depending on the verb class, the Nominative NP may carry a Patient, an Agent, an Instrument, or even a Locus CR, and the Accusative NP that is a part of the Comitative PP would agree with it in terms of the CR. If this assumption is correct, then we would have a floating CF that can be matched to a number of CR's. This analysis is not desirable because we would like to account for these syntactic patterns without having to unnecessarily expand the number of CF-CR correspondences for describing the case-marking system of the language.

We could, of course, choose to ignore this agreement in CR between the Comitative NP and the Nominative NP and establish a new CR, say, Concomitant instead. Again this solution is undesirable because we would have to introduce an additional CR as well as the consequential mapping of the Accusative case form with this new CR.

In want of a better solution, I have chosen the first not-so-desirable solution of marking the CR of the Comitative NP in accordance to the CR of the Nominative NP, so that their agreement can be called upon to prepare the way for the reanalysis of a to as a single unit that associates NP's which agree in both CR and CF. Though I expect a host of new CF-CR associations as a consequence of this solution, what I actually add to the system is just the Accusative Agent which co-occurs only with accusative transitive verbs. Accusative Instrument and Accusative Locus, though expected, are not found in my data.

4.3.4 The Locative Case Form (Lcv)

The Locative case form can host a number of case relations in Amis, namely, Patient, Locus, Place, and Time. The locative form also teams with the preposition saka to mark the Benefactive case form (see section 4.3.6).

The determiners i, itia, itina, and itira mark the locative case form of common nouns. Before singular personal names, the determiner is ici. The expected plural form is ica, but I do not have it in my data. The set of pronouns marked by the Locative CF can also be assigned any of the CR's listed above which may be realised in the Locative CF.

The locative marker i co-occurs with location nouns and locative relator nouns, as in expressions like i lomaq *at home*, i nataoran *in Nataoran*, and i lalikol no kilakilangan *behind the bushes*.

The locative Det i is unique in that it is syntactically different from other locative Det's, i.e., itia, itira, itina, and ici on two counts.

First, in Amis, [+dmns] and [+prsn] locative Det's normally co-occur with location nouns characterised by the derivational suffix -an as in itia lomaq-an *in the house* and ici ina-an *with Mother*. The [-prsn,-dmns] locative marker i, however, does not require the co-occurrence of -an-suffixed location nouns. In expressions like i kakarayan *in Heaven*, i lomaq *at home*, i lalan *on road*, and i nataoran *in Nataoran*, the suffix -an is either absent or petrified in the root.

Secondly, i is the sole determiner that can be used with locative relator nouns, including those that refer to position and orientation in time.

All locative determiners and pronouns contain an i- formative. Examples are ici, itina, itakoan, itisoan, iciraan, and itohnian.

4.3.4.1 Locative Locus

Locus, being an inner CR, serves to subcategorise verbs. Some subclasses of verbs for which the presence of a Locus is required include verbs of location, locomotion, ditransitive verbs, and psychological verbs which have a target or an object toward which perception or feeling is directed. One example from each class is given below.

(4.33) ira ko tamdaw i potal(-an)
locate *people* *yard, outside*
(+V, +lctn) (Nom, +PAT) (Lcv, +LOC)
some/the people are outside

(4.34) a [tara kako i da-demak-an]
will *go* 1s *working-place, office*
(+V, +futr) (+V, -fint) (Nom, +PAT) (Lcv, +LOC)
I am going to the office

(4.35) pabeli kako tia codad iciraan
give 1s *book* 3s
[+V] (Nom, +AGT) (Acc, +PAT) (Lcv, +LOC)
I give the book to him

(4.36) ma-olah kako itisoan
like 1s 2s
(+V, +psch) (Nom, +PAT) (Lcv, +LOC)
I love you

All locative markers, including determiners and pronouns, consist of an i-formative. For more examples, see section 3.4.2.1. There are more co-occurrence restrictions between a Locative Locus NP and the various verb subclasses. See section 5.3.2 in the next chapter.

4.3.4.2 Locative Place

Place, being an outer case relation, is not used in the subcategorisation of verbs and is optional. It also enjoys a greater freedom in word ordering in that, while Locative Locus normally occurs after the predicate, a Locative Place can occur in either sentence-initial or in post-verbal position. Locative Locus and Locative Place share the same locative marker i.

Locative relator nouns can be marked as Locative Place if its co-occurrence with the verb is optional. Otherwise, it is to be marked as Locative Locus. A sentence may contain two or more NP's marked as Locative Place provided the locations referred to are one adjacent of the other or one inclusive of the other within the same spatial domain.

4.3.4.3 Locative Time

The Time case relation can be realised by either the Locative or the Accusative case form. Locative Time resembles Locative Place in that it enjoys a greater freedom in word order. Accusative Time, on the other hand, would be restricted to a post-verbal position. The marker for Locative Time, like that of Locative Place, is the Det i. There are also locative relator nouns that can be marked Locative Time. As with Locative Locus or Place, a sentence may contain two or more NP's marked as Locative Time provided that the temporal locations referred to by these NP's are either one adjacent of the other or one inclusive of the other.

4.3.4.4 Locative Predicate

Locative predicate is a kind of nominal predicate which is the head of a descriptive NP-NP construction. As head of the construction, a locative predicate, or, for that matter, any nominal predicate need not be marked for CR. A locative predicate is marked only for CF, which is given the label [Lcv] because it is identical in form to locative NP's in other environments. Examples of locative predicates can be found in section 3.4.3.2 under Locative Predicates and section 3.6.3.1 under Temporal Predicates.

4.3.5 The Comitative Case Form (Com)

In Amis, the preposition a in conjunction with an accusative determiner to marks the Comitative case form. The CR of the accusative NP after the preposition a is either Patient or Agent. The composite case marker has the form of a to or a ci, meaning *in the company of.*

The form ato, derived through a reanalysis of a to, precedes an NP that shares the same CF and CR with the NP immediately before the preposition. Examples are:

(4.37a) nomako ato ni ina ako
1s *and* *Mother* 1s
[Gen, +AGT] [Gen, +AGT]
by me and my Mother

(4.37b) itakoan ato ici Panayan
1s *and* *Panay*
[Lcv, +LOC] [Lcv, +LOC]
to me and Panay

(4.37c) i terong nomako ato ni ina iso
middle 1s *and* *Mother* 2s
[Gen, +LOC] [Gen, +LOC]
between me and your Mother

Actually, ato could be interpreted as a co-ordinating conjunction because of the agreement of CF and CR between the two NP's. This treatment would leave the preposition a as the sole bearer of the Comitative case form in Amis.

Verbs that are subcategorised by the presence of the Comitative case form include those "mutual" or "reciprocal" verbs that are morphologically marked by the prefix mal- such as mal-taes *hit each other, fight* and mal-kaka *be (with) elder brothers and/or sisters.*

4.3.6 The Benefactive Case Form (Ben)

The Benefactive case form is marked by the preposition saka *for the sake of* in conjunction with a Locative form. We can say that Ben has a composite case marker. The locative form that follows saka can be any of the locative determiners i, ici, itia, itina, or itira, or any one of the locative-marked pronouns. The head of the NP which follows saka is a location noun typically marked by the suffix -an.

By rule 1(b) in section 1.4.3, a [j] glide is inserted between saka and the unitial vowel i of the locative form that follows, thus giving rise to the pronunciation [sakaj] and the possible reanalysis of the Benefactive preposition as sakay.

4.3.7 Neutral Case Forms

In addition to the six case forms, I have included in the tree diagram in Figure 4.6 two additional forms that I have labelled Topic (Top) and Neutral (Neu). Both share the same morphological form, but because of their contrastive use in sentence-initial position as well as different semantic functions, they have to be kept as two distinct forms. While Neu is predicative and functions as the head of constructions, Top is non-predicative.

4.3.7.1 Topic

Topic is distinctly marked by the features [-prdc,-nmtv,+cntr] and is used in a pre-verbal position as in examples 4.40 and 4.41, or in a sentence-initial position preceding the nominal predicate as in examples 4.42-4.44. There is a topic marker iri or a pause to separate the topic from the predicate that immediately follows. The topic marker belongs to a unit set which has iri as

its only member. A topic is somewhat similar to the Nominative and different from the other CF's in that it has the extra function of showing contrast with respect to an external situation or the discourse. Yet it is different from the Nominative in that the topic utilises a positional device as well as a different overt marking. It is treated as a CF because the topic forms are distinctly marked and fit into the case inflectional paradigm (see Figure 4.1 in section 4.2.1 under Determiners and Figure 4.3 in section 4.2.3 under Pronouns).

A topic marked by ci, ia, ina, or ira, or any of their morphological and structural equivalents in the pronoun category, i.e., ako, iso, cira, ami, ita, amo, and ohni, corresponds to the subject of the sentence. Its position before the verb or a nominal predicate signals a contrast or emphasis which looks beyond the confines of the sentence. Carol Harmon (1977:67), for example, has called this form the Contrastive [+CN] case form after Jeng (1976:110). She has illustrated this notion of contrast by the following examples from Kagayanen (Harmon's original page number and sentence number are given in parentheses):

(4.38) mari an pa-tinuga-en-din batag an (p.67,#3.52)
Mary *make-sleep* *she* *child*
(+CN, +AGT) [+V] (+GN, +AGT) (+NM, +OBJ)
as for Mary, she will put the baby to sleep

(4.39) batag an utur-en pal karni an (p.68,#3.53)
child *cut* *Paul* *meat*
(+CN, +BEN) [+V] (+GN, +AGT) (+NM, +OBJ)
as for the child, Paul will cut the meat for him

Note that in the first Kagayanen example, there is a clitic pronoun attached to the verb form, agreeing in CR with the topic (marked by the case form feature [+CN]). In the second example, however, no clitic pronoun is present. In Amis, whatever the CR the topic may have, there is no clitic pronoun bearing the same CR. Amis topic constructions, therefore, resemble the second Kagayanen example instead of the first.

Not all CF's and CR's can be "topicalised". In Amis, in most cases, a topic corresponds to the Patient subject of a verbal or non-verbal construction. A topic, like the subject, is necessarily definite if it is to have a contrastive function, and this is why we find that most topics are marked by definite determiners like ia and ira. Examples 4.40 and 4.41 below show the topic in a pre-verbal position, as opposed to examples 4.42-4.44 that show the topic occurring before nominal predicates.

(4.40) ia tamdaw (iri), na [taes-en haw nomiso]?
man TM *did* *hit* QM 2s
[Top] (+V, +past) (+V, -fint, +ergv) (Gen, +AGT)
as for the man, did you hit him?

(4.41) ira babahi (iri), si-bakic a [mi-radom
woman TM *with-bucket* *draw-from*
[Top] [+V] (+V, -fint)

to nanom i tebom]
water *well*
(Acc, +PAT) (Lcv, +LOC)

as for that woman, she uses a bucket to draw water from the well

(4.42) ia tebom (iri), o raradom-an to nanom
well TM *place-to-draw-from* *water*
[Top] [Neu] (Acc, +PAT)

nira babahi
that *woman*
(Gen, +AGT)

as for the well, it is the place from which that woman draws water

(4.43) ia lomaq (iri), o ni-pa-ini-an nira babahi
family TM *reason-for-bringing* *that* *woman*
[Top] [Neu] (Gen, +AGT)

a [mi-radom to nanom i tebom]
draw-from *water*
(+V, -fint) (Acc, +PAT) (Lcv, +LOC)

as for the family, it is the reason for which that woman is drawing water from the well

(4.44) ia tokar (iri), o sa-pa-ala nia wama
ladder TM *means-for-getting* *father*
Top Neu (Gen, +AGT)

tia nani
cat
(Acc, +PAT)

as for the ladder, it is what the father used to rescue/get the cat with

In my Amis data, the [Top]-[Neu] configuration shown in examples 4.42-4.44 seems to be more frequent than the [Top]-[+V] pattern of examples 4.40 and 4.41. In a great number of cases, the nominal predicate marked as [Neu] is a noun derived from a verb stem. It seems abstract and indefinite. There will be more discussions on nominal predicates in section 4.3.7.2 below.

4.3.7.2 Nominal Predicates

In Amis, there is a case form I would call Neutral (Neu) that is marked on a nominal predicate and provides new information to identify or characterise the subject. By lexicase convention, nominal predicates are marked by CF but not by CR. In this respect, a nominal predicate differs from a topic. There are three predicative case forms in Amis, but I have only given a new label to the [+nmtv] one, i.e., the Predicate Nominative. As has been shown in the composite feature tree above (Figure 4.6), Nom, Top, and Neu can be distinguished by their feature specifications which is recapitulated below:

Nom: [-prdc,+nmtv,-cntr]

Top: [-prdc,+nmtv,+cntr]

Neu: [+prdc,+nmtv]

In a strict sense, [±prdc] (predicative) is not a sub-CF feature and the CF labels normally cover only the feature [+nmtv] (nominative) and the localistic features. In the present study, the feature Neu represents the feature matrix the feature [+prdc,+nmtv] while other labels do not normally make that distinction. Predicate Locative and Predicate Genitive would have to be marked for the feature [+prdc]. Since the predicative and non-predicative Genitive forms are similarly marked, I have simply extended the use of one label (Gen) to cover both. The same applies to the predicative and non-predicative Locative with the label Lcv. Examples are given below.

(4.45) i lomaq kia nani
house *cat*
[Lcv, +prdc] [Nom, +PAT]
the cat is in the house

(4.46) i pitoay sa kako a [l-em-oad]
seven ls *get-up*
[Lcv, +prdc] [+Adv, +aspt, -drtv] [Nom, +PAT] [+V, -fint]
I get up at seven

(4.47) itakoan kia nani
with-me *cat*
[Lcv, +prdc] [Nom, +PAT]
the cat is with me

(4.48) nomako kina alobo
mine *this* *bag*
[Gen, +prdc] [Nom, +PAT]
this bag is mine

As we were saying, the new label Neu will be used to mark those nominal predicates that are identical in form with the Topic and not those idential with [Lcv] and [Gen]. Examples 4.49a to 4.51b below correspond to the topicalised NP-NP constructions 4.42-4.44 given in the previous section. While examples 4.42-4.44 do not require a subject NP, examples 4.49-4.51 do.

These corresponding sentences involve the same situation context and similar nominal constituents but they carry different information content by virtue of their structural differences. Moreover, the (a) and (b) sentences below call for different semantic interpretations because the NP's chosen as subject in these sentence pairs are different and hence the feature of definiteness is marked on a different NP. Consider the following examples:

(4.49a) o raradom-an to nanom nira babahi kia tebom
place-to-draw-from *water* *that woman* *well*
[Neu] [Acc, +PAT] [Gen, +AGT] [Nom, +PAT, +dfnt]

the well is where that woman draws water from
or, *the well is that woman's place to draw water from*

(4.49b) ia tebom ko raradom-an to nanom nira babahi
well *place-to-draw-from* *water* *that* *woman*
[Neu] [Nom, +PAT, +dfnt] [Acc, +PAT] [Gen, +AGT]

the place from which that woman draws water is the well

(4.50a) o ni-pay-ini-an nira babahi to nanom kia lomaq
reason-for-bringing *that woman* *water* *family*
[Neu] [Gen, +AGT] [Acc, +PAT] [Nom, +PAT, +dfnt]

the family is why that woman gets water
or, *the family is that woman's reason for getting water*

(4.50b) ia lomaq ko ni-pay-ini-an nira babahi to nanom
family *reason-for-bringing* *that woman* *water*
[Neu] [Nom, +PAT, +dfnt] [Gen, +AGT] [Acc, +PAT]

the reason why that woman gets water is the family

(4.51a) o sa-pay-ala nia wama tia nani kia tokar
means-for-getting *father* *cat* *ladder*
[Neu] [Gen, +AGT] [Acc, +PAT] [Nom, +PAT, +dfnt]

the ladder is what the father used to get/rescue the cat
or, *the ladder is the father's means for getting/rescuing the cat*

(4.51b) ia tokar ko sa-pay-ala nia wama tia nani
ladder *means-for-getting* *father* *cat*
[Neu] [Nom, +PAT, +dfnt] [Gen, +AGT] [Acc, +PAT]

what the father used to get/rescue the cat is the ladder

In these pairs of examples, three things are worth mentioning. First, the Nominative NP is always definite and the nominal predicate, where new information is provided, can be either definite or indefinite. Depending on the choice of determiners, a [Neu] nominal predicate which is a common noun

can either be definite or indefinite. If it is an abstract noun, derived from a verb, it is always indefinite and marked optionally by the Det o. Pronouns and personal names are always definite.

Secondly, while nominal predicates marked by [Gen] or [Lcv] are descriptive, those marked by [Neu] can be either descriptive or identificational. In Amis, this distinction is not reflected by a difference in morphological shape. Rather, it is reflected in the subject choice between the two NP's in an NP-NP construction. Consider the following examples:

(4.52) ci Kilang kako
Kilang 1s
[Neu] (Nom, +PAT)
I am Kilang

(4.53) o wawa ni Kilang kako
child *Kilang* 1s
[Neu] (Nom, +PAT)
I am Kilang's child

(4.54) o wawa no Pangcaq kako
child *Amis* 1s
[Neu] (Nom, +PAT)
I am a member of the (Amis) Pangcaq tribe

(4.55) tada-mi-adop-ay ci Adop
person-who-hunt-by-profession *Adop*
[Neu] (Nom, +PAT)
Adop is a hunter by profession

(4.56) misa-lomaq-ay ci Boting
carpenter *Boting*
[Neu] (Nom, +PAT)
Boting is a carpenter

(4.57) cima ko kilim-en nomiso?
who *search* 2s
[Neu] (Nom, +PAT) (Gen, +AGT)
who are you looking for?
Lit. *who is the one sought by you?*

(4.58) ia misa-lomaq-ay iri, ci Boting
carpenter TM *Boting*
(Top, +PAT) [Neu]
the carpenter is Boting

(4.59) ia tamdaw iri, o ma-apa-ay
man TM *fool*
(Top, +PAT) [Neu]
the man is a fool

(4.60) ia tamdaw iri, caay ka [o wama nomako]
man TM *not* *father* 1s
(Top, +PAT) [+V] [+P] [Neu]
the man is not my father

(4.61a) cira iri, o si-kawas-ay no niaroq niam
3s TM *witch-doctor* *place* lexcl
(Top, +PAT) [Neu]
he is the witch-doctor of our place

(4.61b) o si-kawas-ay no niaroq niam cira
witch-doctor *place* 3s
[Neu] (Nom, +PAT)
he is the witch-doctor of our place

In Amis, the distinction between description and identification, if it has to be expressed at all, is not reflected by a difference in morphological shape. Nor is definiteness a reliable cue since both the indefinite Det o and the demonstrative Det ia are found in these examples. On the basis of the examples given above, I would venture to say that the nominal predicate alone does not carry an identifying function in Amis. If has to be done in conjunction with other syntactic and/or morphological devices. In examples 4.55-4.59 and 4.61a-4.61b it is the derived N in either the subject or predicate position which signals the identificational function of the nominal predicate. In examples 4.58-4.59 and 4.61a the topic further identifies by way of contrast in addition to the deverbal [Neu] nominal predicate that already identifies. Both the structural description and the English translation of these examples serve to illustrate this point.

Thirdly, though sentences 4.49a-4.51b show two PAT constituents, the 1/Sent constraint is not violated because one PAT is the subject of the NP-NP construction while the other PAT is dominated by the derived N which carries it over from the case frame of the source V. Lastly, the Genitive constituent following the derived N can be interpreted as either a possessor of the derived noun or a Genitive Agent if the source V belongs to the ergative transitive class. Luckily, the structural ambiguity does not seem to create any difficulty in the understanding of these sentences, possibly because only a limited subset of the derived nouns, those which have been derived into the concrete noun class, allow the possessor interpretation.

4.3.7.3 Non-verbal Complement

In section 4.2.2, in conjunction with the discussion on prepositions, we have already introduced some complements that can come after the prepositions a, ka, and na, which are prepositions that can introduce a sentential complement. All three prepositions can introduce both verbal and non-verbal complements. Where case marking is concerned, we pay attention only to the non-verbal complements.

Other nominal complements are the possessors of possessed head nouns, but they are not introduced by prepositions. Examples of NP's with possessors marked

as Genitive Locus have been presented before in section 3.2.3.1 and we are not going to include them here.

In section 4.2.2, we have already mentioned that, of the three different a forms, one is a preposition that introduces a sentential complement. It takes both verbal and non-verbal construction as its complement. Examples can be found in section 4.2.2. If the embedded S is an NP-NP construction, with the subject NP understood, the nominal predicate bears the Neu case form and is not introduced by any Det. It seems that the only likely nominal complements after the preposition a are attributive in nature. These nominal complements follow a head N and are to be translated as: "the N which is ..." as in the following examples:

(4.62) wawa a babahi
child female
girl, daughter
or, *child who is female*

(4.63) saqpiq-ay a bali
cool-one wind
cool breeze
or, *cool one which is a breeze*

(4.64) adada-ay a kamay
sore-one hand, arm
sore arm
or, *sore-one which is the arm*

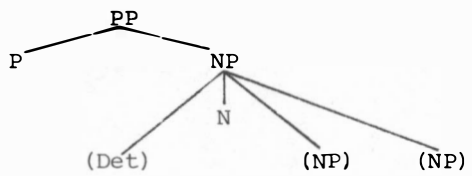
The following examples show the head-attribute nominal forms used in sentences:

(4.65) ira ko saqpiq-ay a bali i sansandeb
exist cool-one wind dusk
[+V] (Nom, +PAT) (Lcv, +TIM)
there is a cool breeze at dusk

(4.66) si-nani kia wawa a babahi nira
have-cat child female 3s
[+V] (Nom, +PAT)
his daughter has a cat

(4.67) icoa-an ko adada-ay a kamay?
which-one sore-one hand, arm
[Neu] (Nom, +PAT)
which of your arms is sore?

In these examples, the expected Det preceding the attributive N (of the nominal predicate of the embedded S) has disappeared after the preposition a, thus creating an intermediate monstrosity of the form N a N, which forces us to revise schema 4.5c as follows: (4.5d) "Nominal" Complement:



N a N can be derived into a nominal compound of the form N-a-N, also mentioned in section 4.2.2 in conjunction with the various functions of a. The compound noun can be further derived into a stative verb of the form si-N (see section 6.2.1) as in the following example:

(4.68) si-saqpiqay-a-bali i sandandeb
have-a-cool-breeze *dusk*
[+V] [Lcv, +TIM]
there is a cool breeze at dusk

The derived verb si-saqpiqay-a-bali depicts a meteorological phenomenon in a way similar to other si-verbs of a simpler form such as si-kodem *cloudy* and si-orad *rainy*.

Another a form is the preposition a which bears the Comitative case form. It is followed by an NP marked by the Accusative case form. The preposition a and the accusative determiner to or ci constitute the composite case marker for the Comitative case form. Through a reanalysis of a to, we get in Amis a new form ato which requires the co-occurrence of another Det in the following NP and is thus treated as a single lexical unit. Since the NP's linked by ato bear identical CF and CR, this new form is a co-ordinating conjunction. The Comitative case form, i.e., the preposition a in conjunction with the Accusative case form, can cover only the PAT and AGT case relations on non-pronouns. The rest is handled by ato with whatever CF and CR shared by the two linked NP's.

Whereas the preposition a, when introducing a non-verbal sentence complement, implies something that is or will be, i.e., something that exists in non-past time, the preposition na implies past time, but I am not sure that there is a preposition na co-occurring with a non-verbal complement. The following examples are the only ones I can find in my data but, in this context, the na form is better analysed as a verb than as a preposition.

(4.69) i salopiko na [o pacakayay] i na-ayaw
corner *past* *store* *before*
[Lcv, +PLC] [+V] [Neu] [Lcv, +TIM]
there used to be a store at the corner

(4.70) caay ka [na [o paemotay]] ci Looh
not *was* *fisherman* *Looh*
[+V, +fint, +xlry, +ngtv] [+P] [+V, -fint, +xlry, +past] [Neu] [Nom, +PAT]
Looh [definitely] was not a fisherman before

As for the preposition ka, it always follows the negative verb caay or the prohibitive verb aka. In the former case, it may be followed by either a verbal or a non-verbal complement. Examples of the preposition ka introducing a non-verbal complement include the following:

(4.71) caay ka [o wama nomako] cira
not *father* 1s 3s
[+V] [+P] [Neu] [Nom, +PAT]
he is not my father

(4.72) o misa-lomaq-ay ci Dihang, caay kaw [ci Adop]
carpenter *Dihang* *not* *Adop*
(Top, +PAT) [Neu] [Neu]
it is Dihang that is the carpenter, not Adop
Lit. *the carpenter is Dihang, not Adop*

In example 4.72, the first English translation can be misleading. The known information is the carpenter and the new information is Dihang, contrasted with Adop. Since the Nominative, Accusative, Topic, and Neutral case forms of personal nouns are identical in shape, marked by the Det ci for singular and ca for plural, it is difficult to tell them apart. The fact that ci Adop is a complement helps to determine its status as a [Neu] predicate NP instead of a subject and it helps the analysis of the first part of the sentence. Note that the preposition ka of example 4.71 is phonetically combined with the following Det o, yielding the pronunciation [kaw]. The combinatorial form has been reanalysed as one unit kaw when it is applied to personal nouns and pronouns. The following examples show kaw before pronouns whereas example 4.72 shows kaw before a personal name:

(4.73) caay kaw nomako kini
not *mine* *this*
[+V] [+P] [Gen] (Nom, +PAT)
this is not mine

(4.74) caay kaw [itakoan] ko nani nira
not *with-me* *cat* 3s
[+V] [+P] [Lcv] (Nom, +PAT)
I don't have her cat with me

Before verbal complements, we find only the ka form and not the kaw form as in the following example:

(4.75) caay ka-banaq kako to solinayay a baqket
not *know* ls *exact, real* *weight*
[+V] (+V, -fint) (Nom, +AGT) (Acc, +PAT)
I do not know the exact weight

In view of verb forms prefixed by ma- and pa-, we consider ka also as a verbal prefix. This analysis is adopted because, as can be seen with pi-solol in example 4.76 below, accusative transitive verbs after the negative verbs do not require the preposition ka which is used in the language with nominal complements. We can say that the negative ligature ka has diversified into a preposition and a verbal prefix.

(4.76) caay [pi-solol] kia babahi, nika caay [ka-demec] ko
not *permit* *woman, wife* *but* *not* *yield*
[+V] (+V, -fint) (Nom, +PAT) [+V] (+V, -fint)

babaqinay nira a [mi-sawad tia wawaan]
man 3s *abandon* *child*
(Nom, +PAT) (+V, -fint) (Lcv, +LOC)
the wife did not permit it, but the husband insisted on abandoning the child

4.4 Locative Relator Nouns

It was mentioned in section 3.4.3.3 that spatial orientation is expressed by the use of locative relator nouns in Amis. In this section we shall explore the syntactic and semantic characteristics of these locative relator nouns, especially in terms of localistic features.

Locative relator nouns are a set of locative-type nouns which function as the syntactic heads of locative NP constructions to specify spatial orientation. An example of such a locative NP is:

(4.77) i tepar no lalan
side *road*
by the side of the road

Locative-type nouns like tepar *side* are used to supplement the very small inventory of prepositions in a language like Amis, Sora, or Tagalog and to compensate for the lack of case inflections on nouns in many analytic languages such as Chinese and Vietnamese.

Thompson (1965:200-202) and Clark (1978:53-61) have labelled nouns of this type in Vietnamese "locative relator nouns" while Starosta (1967:169-179 and 1971:195-200) has once called their counterparts in Sora "noun auxiliaries". The term "locative relator nouns" was subsequently adopted because the term "noun auxiliaries" may suggest that they are less than full-fledged nouns.

The class of locative relator nouns (Nr) in Amis can be characterised in the lexicon by the following set of features:

(4.78) $\begin{pmatrix} +N \\ +lctn \\ +pssd \end{pmatrix}$

Nr's are different from other location nouns such as Nataoran, lomaq *house*, lalan *road*, and locative pronouns like icoa *where*, itini *here* and itila *there*, in that an Nr is obligatorily possessed [+pssd] and requires a possessive attribute. In this sense, Nr's are syntactically bound. Nr's in Amis, as in Sora (Starosta 1971:195) and Vietnamese (Clark 1978:59), are necessary to satisfy the selectional requirements of certain verbs that carry information on spatial orientation. This is shown in Chapter 5 with verbs of location, verbs of motion, and verbs of transportation.

Amis Nr's given in the list in section 3.4.3 above can be further characterised with binary deictic distinctive features indicating orientation in space. The features used are: [±ncls] (enclosure), [±ntrr] (interior), [±hrzn] (horizontal), [±ltrl] (lateral), and [±yang] (from Chinese yang for the more prominent and superior of complementary bipolar qualities). A feature tree for the Nr's is given in Figure 4.8.

The localistic features of orientation are mostly self-explanatory. For example, the feature [+ncls] refers to an orientation with which an enclosure is relevant as a point of reference. With [+hrzn], it is the horizontal plane. An orientation marked [+yang] refers to the more prominent, superior, or the "positive" end of bipolar qualities.

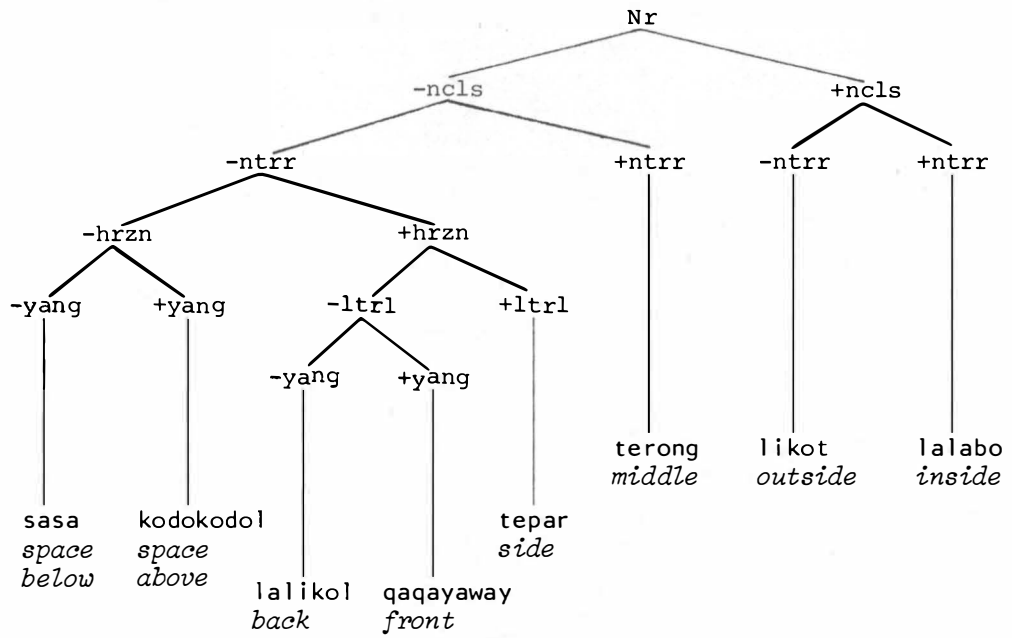


Figure 4.8 Semantic Feature Tree of Locative Relator Nouns

The following are the Subcategorisation Rules and Redundancy Rules needed to characterise the class and members of locative relator nouns in Amis.

RR-1 $[+\text{lctn}] \rightarrow \begin{bmatrix} -\text{prnn} \\ -\text{prsn} \\ -\text{nmtv} \\ -\text{drcn} \\ +\text{LOC} \\ +\text{PLC} \end{bmatrix}$

RR-2 $\begin{bmatrix} +\text{lctn} \\ +\text{pssd} \end{bmatrix} \rightarrow \left(\begin{bmatrix} \\ + \begin{bmatrix} +\text{Det} \\ -\text{nmtv} \\ -\text{drcn} \end{bmatrix} \end{bmatrix} \_\_ \begin{bmatrix} +\text{N} \\ -\text{nmtv} \\ +\text{drcn} \\ +\text{sorc} \end{bmatrix} \right)$

SR-1 $[+\text{N}] \rightarrow [\pm\text{prnn}]$

SR-2 $[-\text{prnn}] \rightarrow [\pm\text{prsn}]$

SR-3 $[-\text{prsn}] \rightarrow [\pm\text{lctn}]$

SR-4 $[+\text{lctn}] \rightarrow [\pm\text{pssd}]$

SR-5 $\begin{bmatrix} +\text{lctn} \\ +\text{pssd} \end{bmatrix} \rightarrow \begin{bmatrix} \pm\text{ncls} \\ \pm\text{ntrr} \end{bmatrix}$

SR-6 $\begin{bmatrix} -\text{ncls} \\ -\text{ntrr} \end{bmatrix} \rightarrow [\pm\text{hrzn}]$

SR-7 $[+\text{hrzn}] \rightarrow [\pm\text{ltrl}]$

SR-8 $\begin{bmatrix} [-\text{ltrl}] \\ [-\text{hrzn}] \end{bmatrix} \rightarrow [\pm\text{yang}]$

What RR-1 says is that location nouns are neither pronouns nor personal nouns; it is the result of sub-categorisation. It also says that location nouns are marked by the Locative case form [-nmtv,-drcn], and by either a Locus of a Place case relation. The contextual feature in RR-2 says that a possessed location noun, i.e., a locative relator noun, must always co-occur with a preceding locative determiner and a following NP marked by the Genitive case form [-nmtv,+drcn,+sorc]. No Inflectional Redundancy Rules need to be specifically stated for the Nr's.

A fully specified feature matrix of an Nr will contain at least the following:

(4.78a)
$$\begin{bmatrix} +N \\ +lctn \\ +pssd \\ -nmtv \\ -drcn \\ \begin{pmatrix} +LOC \\ +PLC \end{pmatrix} \\ + \begin{pmatrix} -Det \\ -nmtv \\ -drcn \end{pmatrix} \_\_ \begin{pmatrix} +N \\ -nmtv \\ +drcn \\ +sorc \end{pmatrix} \end{bmatrix}$$

plus whatever locative features it takes to uniquely identify each lexical Nr. Thus, for terong *middle* we need two additional features: [-ncls,+ntrr] while qaqayaway *front* needs four: [-ncls,-ntrr,+hrzn,+yang].

CHAPTER 5

CLASSIFICATION OF AMIS VERBS

5.0 Verbal Classification

Lexical information on verbs includes those syntactic, semantic, and morphological features that distinguish one subclass of verbs from another. As we identify in our analysis more syntactically relevant distinctive features, we get an increasingly finer subcategorisation of verbs. Ultimately, lexical information is meant to uniquely identify each lexical entry by way of contrasts with a minimal set of distinctive features. This would provide the basis for phonological realisation and semantic interpretation. Such minute details as the different shades of colour or the different degrees of emotional intensity are best left to lexicographers and semanticists who should be, in the first place, good grammarians. Differences in meaning that are non-distinctive in the sense that they do not produce syntactic consequences would therefore be excluded from grammar proper. For grammatical descriptions, it is sufficient for a grammarian to take on the tasks of capturing generalisations about syntactic structures and distributional patterns, and of representing these generalisations formally and explicitly in terms of lexical subcategorisation, derivation, and redundancy rules.

Ever since Fillmore proposed to "clear the stage in order to examine some of the ways in which case concepts can be called on to describe the syntactic and semantic characteristics of certain English verbs" (Fillmore 1968b:383), the concepts of case relations and case frame have been indispensable in the description of predicate and verb types. As Fillmore has pointed out,

> The abstract study of predicates allows us, first of all, to describe each predicate according to the number of arguments there are associated with it. Such a description may be thought of as analogous to a classification of predicate-words in natural language according to the number of nouns they require in a syntactically complete expression (ibid.:373).

To define verb classes according to the cases with which the verbs can or must co-occur provides us with a fundamental, though not the only way of verbal subcategorisation. Ramos (1973:110), for instance, finds it necessary to define verbs in terms of their inherent semantic features. Clark (1978:43) uses both semantic and case frame features as her basis of classification of Vietnamese verbs. DeGuzman (1978:166-258), in her detailed study of Tagalog

verbs, has approached the issue of verbal classification from three different perspectives, namely, from the angles of case frames, verbal inflection, and inherent semantic features.

The following procedure is followed in the present study. First, a primary classification is obtained by referring to the case frame features. Then, we would look into (1) the implicational relation between CF and CR, (2) the inherent semantic features, and (3) the morphological shapes of the verbs in order to refine the initial classification. By cross-classifying the primary verb classes with the three types of features mentioned above, we can refine the initial classification.

An attempt is made here to show that, to a large extent, verb classes defined by case frame features and the correspondences between CF and CR indeed match the morphological form classes of verbal affixes, as well as a classification based on inherent semantic features. In other words, case, morphological, and semantic features do converge on a cross-classification of verbs.

5.1 The Role of Inflectional Features

Since DeGuzman (1978:129-135) has taken great pains to clarify the notions of inflection and derivation within the lexicase model, I would begin with a brief examination of her ideas. DeGuzman criticises previous works on Tagalog for not making "a clear-cut distinction between inflectional and derivational categories or processes" (ibid.:129). She finds it useful to separate the two because, in doing so, she can strip off what she identifies as inflectional affixes and deal with the remainder, which she calls the primary verb stem, in her description of verbal subcategorisation and derivation. The criteria she uses to distinguish inflection and derivation involve (a) the existence of a paradigm for a single lexical entry, (b) predictability of form and meaning, and (c) change in semantic content and/or syntactic features, particularly that of case frame. Actually, criterion (b) follows from criterion (a).

It is important to note here that DeGuzman's criterion (c) frees derivation from the confines of the traditional Parts of Speech and allows for derivations within the class of verbs. By criterion (c) a change in case frame features such as the addition, deletion, or reinterpretation of case relations means a change in verbal subcategory and is hence a derivation.

In the present study we have proposed to incorporate CF-CR mappings as extended case frame features. This has serious theoretical implications because the CF-CR mappings include subject choice. If a change in extended case frame features also means a change in verbal subcategory, it follows that, within the present lexicase model, voice is necessarily a derivational feature. "Voice" involves both a change in semantic content and syntactic features, hence it is not inflectional by DeGuzman's third criterion.

As the second criterion goes, perhaps the Tagalog focus system is well-developed enough for DeGuzman to claim full predictability of the related forms, yet one should bear in mind that there are derivations that are 100% productive and also fully predictable in terms of meaning and form (cf. Ikranagara 1980:22, 51; Aronoff 1976:35-45). Where full predictability is concerned, the Amis data also support a derivational analysis. Even though

there are what one may call "instrumental focus" and "locus focus" constructions in the language, their occurrence is very limited and unpredictable (see sections 3.3.2.1 and 3.4.2.2).

Where aspect is concerned, Amis expresses what would notionally correspond to DeGuzman's inflectional aspect features: [±fin] (finite), [±beg] (begun), [±comp] (completed), and [±imp] (imperative) with a variety of syntactic devices. For instance, the difference between finite and non-finite verbs in Amis is not reflected by a difference in morphological marking; rather, it is the absence of a nominative actant that signals a non-finite verb. Here are a few examples:

(5.1a) si-tokar kia wama a [mi-ala tia nani
use-ladder *father* *rescue* *cat*
[+V, +fint] [Nom, +AGT] [+V, -fint] [Acc, +PAT]

i kodokodol no kilang]
top, above *tree*
[Lcv, +LOC]

the father uses a ladder to rescue the cat from the tree

(5.1b) na [si-tokar kia wama a [mi-ala
did *use-ladder* *father* *rescue*
[+V, +fint, +past] [+V, +fint] [+V, -fint]

tia nani i kodokodol no kilang]]
cat *top, above* *tree*
[Acc, +PAT] [Lcv, +LOC]

the father used a ladder to rescue the cat from the tree

(5.1c) ma-ala kia nani nia wama a [si-tokar]
rescue *cat* *father* *use-ladder*
[+V, +fint] [Nom, +PAT] [Gen, +AGT] [+V, -fint]

i kodokodol no kilang
top, above *tree*
[Lcv, +LOC]

the father rescued the cat with a ladder from the tree

Lit. *the cat rescued by the father who used a ladder from the tree*

In example 5.1a, si-takor *use-a-ladder* is a finite verb while in 5.1b and 5.1c si-takor is non-finite. Likewise, in example 5.2a below, mi-parokod *kick* is finite while in example 5.2b mi-parokod is non-finite.

(5.2a) mi-parokod cira to panan
kick 3s *door*
[+V, +fint] [Nom, +AGT] [Acc, +PAT]

he kicks at the door

(5.2b) ma-calibad cira a [mi-parokod] to panan
angry 3s *kick* *door*
(+V, +fint) (Nom, +AGT) (+V, -fint) (Acc, +PAT)
he is kicking at the door angrily

The finite and non-finite distinction signals a difference in dominance relation and, in Amis at least, a difference in case frame feature where the Nominative CF is concerned. Except for quotative and compound sentences and constructions with tense verbs, all sentences in Amis, simple or complex, are assumed to have only one finite verb. As will be shown below, tense verbs take finite complements that are identifiable by the presence of a Nominative NP. Non-finite verbs occur in complex sentences as heads of sentence complements which do not have subject NP's. As such, they never precede the main verb. This co-occurrence restriction can be expressed by the following redundancy rules:

(5.3) [+V] → (+__([+V]), -__[+fint])

There are subclasses of verbs that take an obligatory sentence complement. If the embedded sentence is a verbal construction, the non-finite verb which is the head of the construction can then be referred to for the classification of the main verb, which may be a Manner Verb, an Auxiliary Verb, or a Negation Verb.

Thus, all verbs can initially be classified into two categories, namely, those that have to take sentence complements with non-finite verbs and those that don't. Among those that do not take sentence complements with non-finite heads are the main verbs of simple sentences as well as the Tense verbs: a for future tense or irrealis and na for past tense or realis. Since a and na are followed by finite verbs that are accompanied by a Nominative NP, their existence violates the co-occurrence restriction expressed in rule 5.3 that a verb cannot be followed by another finite verb. If we recognise them as verbs instead of adverbs or prefixes, we would have to explicitly mark them as exceptions, as we must with grammatically analogous verbs such as know or say in English.

After a predicate indicating time, place, or instrument, a non-finite action verb usually follows. In fact, most verbs can participate rather freely as the non-finite complement of another verb. In other words, most verbs have a finite and a non-finite membership. These two subclasses can be initially obtained with the following subcategorisation rule:

(5.4) [+V] → [±__[-fint]]

Of the subclass of verbs that do not take non-finite complements, there is the small group of tense verbs that take finite complements. See examples 3.80, 5.12a and 5.12b below. This further subcategorisation can be stated by the following subcategorisation rule:

(5.5) [-__[-fint]] → [±__[+fint]]

With verbs that require a sentence complement, the verbal sisterhead can be called upon to characterise the main verb. We can say that the contextual features [±__[-fint]] and [±__[+fint]] supplement case frame features in the subcategorisation of verbs. The [+__[-fint]] subclass includes Manner verbs,

Instrumental verbs, Aspectual verbs, and Negation verbs. The two Tense verbs, a and na, which are exceptions to the RR 5.3, can be characterised as [+__[+fint]]. The following are sentence examples (the first four from Chapter 3) with verbal complements:

(3.142) ma-sengib cira a [mi-lias]
sad 3s *leave*
[+V, +fint, +mnnr] [Nom, +PAT] [+P] [+V, -fint]
he went away sadly

(3.145) si-losa cira a [mi-si-olah to wawa nira]
with-tears 3s *plead* *child* 3s
[+V, +fint, +mnnr] [Nom, +PAT] [+P] [+V, -fint] [Acc, +PAT]
in tears she pleaded with her child

(3.79) si-bakic kia babahi a [mi-radom to nanom i tebom]
with-a-bucket *woman* *draw-from* *water* *well*
[+V, +fint] [Nom, +PAT] [+P] [+V, -fint] [Acc, +APT] [Lcv, +LOC]
the woman used a bucket to draw water from the well

(3.80) na [si-tokar kia wama a [mi-ala tia nani]]
did *with-a-ladder* *father* *rescue, get* *cat*
[+V, +fint] [+V, +fint] [Nom, +PAT] [+P] [+V, -fint] [Acc, +PAT]
the father used a ladder to rescue the cat

(5.6) ma-banaq to haw kiso a [mi-boting]?
know *already* QM 2s *catch-fish*
[+V, +fint] [+Adv, +sptl] [Nom, +PAT] [+P] [+V, -fint]
do you know how to fish?

(5.7) ma-ngalay haw kiso a [mi-icep]?
like QM 2s *chew-betel-nut*
[+V, +fint] [Nom, +PAT] [+P] [+V, -fint]
do you like to chew betel-nuts?

(5.8) sa-terep sa han a [orad-an] ko remiad
stop *just* *already* *rain* *weather*
[+V, +fint] [+Adv, +sptl, -drtv] [+Adv, +sptl, +prft] [+P] [+V, -fint] [Nom, +PAT]
it has just stopped raining

(5.9) caay kako ka [ngalay a [tara]]
do-not 1s *want, like* *go*
[+V, +fint, +ngtv] [Nom, +PAT] [+P, +ngtv] [+V, -fint] [+P] [+V, -fint]
I don't want to go

(5.10) aka ka [t-em-angic]
don't *cry*
[+V +fint +ngtv +mprt] [+P +ngtv] [+V -fint]
don't cry!

(5.11) caay ka [olah] kako a [tahkal to labil]
do-not *like* ls +P *go-out* *night*
[+V +fint +ngtv] [+P +ngtv] [+V -fint] [Nom +PAT] [+V -fint] [Acc +TIM]
I don't like to go out at night

Note that except when it comes after a negation verb, a non-finite verb is always introduced by the preposition a or na. After a negation verb caay or aka, the preposition ka is used. Depending on the verb, the non-finite form after ka may be just the root form, stripped of all affixation, as olah and ngalay in examples 5.11 and 5.9. Or, it can be an affixed form such as t-em-angic in example 5.10. After a tense verb na or a, no preposition is required and, as has been mentioned above, the verb following a tense verb is finite, such as si-tokar in example 3.80. Perhaps historically there was once a preposition a, now assimilated to the previous word that ends in the same vowel.

Most Amis verbs can appear as the head of a sentence complement. Even the [+__[-fint]] verbs themselves can in turn be the head of a sentence complement. Example 3.80 above shows an instrumental verb si-tokar governed by the tense verb na while it in turn takes mi-ala as its own verbal complement. Example 5.9 shows an affective verb ngalay after the negation verb caay, which in turn takes tara as its complement. Example 5.11 shows a similar construction with the subject NP coming after the second V instead of the first. The following pair of examples show a tense verb complementing a negation verb and vice versa, with a difference in meaning.

(5.12a) na [caay ka [o pacemotay] ci Looh] (M76.1)
was *not* *fisherman* *Looh*
[+V +fint +xlry +tnse] [+V +fint +xlry +ngtv] [+P +ngtv] [+N Neu] [Nom +PAT]
Looh was not a fisherman

(5.12b) caay ka [na [o pacemotay] ci Looh] (M76.2)
not *was* *fisherman* *Looh*
● [+V +fint +xlry +ngtv] [+P +ngtv] [+V -fint +xlry +tnse] [+N Neu] [Nom +PAT]
Looh [definitely] was not a fisherman before

In most cases, a non-finite verb form is homophonous with its finite counterpart. We consider the finite [+fint] and the non-finite [-fint] forms to be members of a regular paradigm because both the verb forms after the positive ligature a and those after the negative ligature ka are predictable from the source. Even though an aspectual verb such as sa-terep in example

5.12 is never found to be used as a non-finite verb, the non-occurrence is predictable by its morphological shape and meaning. These exceptions can be indicated in the lexicon and later handled by redundancy rules. In general, in terms of its full productivity and predictability, we can say that the finite/non-finite dichotomy is an inflectional feature that covers all the verbs in Amis.

Aspect features corresponding to DeGuzman's [±beg] (begun) and [±comp] (completed) are marked on adverbs instead of verbs in Amis. The post-verbal particles are analysed as adverbs instead of verbal suffixes because they do not shift the stress on the ultimate syllable of the verbs. I have chosen to characterise Amis aspectual [+sptl] adverbs with the following features:

ASPECTUAL	[+sptl]	- This positively marked feature is used to distinguish the set of aspectual adverbs from other adverbs, say, the manner adverbs.
INCHOATIVE	[±inch]	- The positively marked feature means that the event or action indicated by the verb has begun to take place. It corresponds to DeGuzman's aspect feature [±beg].
PERFECTIVE	[±prft]	- The positively marked feature means that the event or action indicated by the verb has been completed. It corresponds to DeGuzman's aspect feature [±comp].
DURATIVE	[±drtv]	- The positively marked feature means that the event or action indicated by the verb lasts for a duration in time, while the negatively marked feature means the action is punctual.
PROGRESSIVE		- This is a cover label for three features: [+inch,-prft,+drtv]. It means that the event or action indicated by the verb is on-going.
PRESENT	[+pres]	- This is a tense feature that is sometimes attached to an aspect feature. An example is anini *now* which is marked as present progressive. This feature is needed to distinguish anini from to which is also marked [+inch,-prft,+drtv] for progressive but unmarked for the feature [±pres].

In the following are a few examples with aspectual adverbs. Examples 5.13 and 5.14 show the difference between anini and to. In examples 5.15 and 5.16 we have sequences of adverbs whose meaning is the sum total of the feature specification of the members.

(5.13)

mi-bacaq	anini	cira	i	ciris
wash-clothes	*now*	3s		*river*
[+V]	[+Adv, +sptl, +inch, -prft, +drtv, +pres]	(Nom, +PAT)		(Lcv, +PLC)

she is washing clothes by the river

(5.14) ma-korokoro to$_1$ kia bekeloq (a) [tara i sasa
roll *stone* *go-toward* *bottom*
[+V, +fint] [+Adv, +sptl, +inch, -prft, +drtv] [Nom, +PAT] [+V, -fint] [Lcv, +LOC]

no lotok]
hill
the stone is/was rolling downhill
Lit. *the stone is/was rolling to go toward the bottom of the hill*

(5.15) sa-terep sa han ko orad
stop *just* *already* *rain*
[+V] [+Adv, +sptl, -drtv] [+Adv, +sptl, +prft] [Nom, +PAT]
the rain has just stopped

(5.16) kaen sa han to$_2$ sapaqyo ci kaka ako,
eat *just* *already* *medicine* *older-sibling* 1s
[+V] [+Adv, +sptl, -drtv] [+Adv, +sptl, +prft] [+Det] [Acc, +PAT] [Nom, +AGT]

iri kemat sa to$_3$
then *sleep* *just* *already*
[+Conj] [+V] [+Adv, +sptl, -drtv] [+Adv, +sptl, +inch]
my elder brother has just taken the medicine and gone to sleep

Note that there are three different to forms in these examples. First, to$_2$ in example 5.16 is a determiner in the accusative case form (cf. Figure 4.1 in section 4.2.1). The other two forms, to$_1$ and to$_3$, seen respectively in examples 5.14 and 5.16, are aspectual adverbs. to$_1$ is a progressive aspect marker while to$_3$ marks the beginning of a state or action. With to$_3$, the feature [-drtv] of the sa additive is neutralised so that the combined form sa to may mean that a certain state of being or action has just begun and is still going on. The combined form sa han in examples 5.15 and 5.16 means that a certain action has been completed.

As for imperative verbs, since the correspondence between them and non-imperative verb forms is quite regular and the meaning always predictable, they are qualified to be treated as inflectional by DeGuzman's criterion (a). In the present study, however, I have chosen to handle these related verb forms with derivation in accordance with her criterion (c), with the understanding that some derivational processes may also enjoy full predictability of form and meaning (criterion (b)) while effecting changes in semantic content and/or syntactic features, particularly that of the case frame (criterion (c)). The derivation of imperative verbs will be presented in Chapter 6 (section 6.3.2.5).

In summary, both types of DeGuzman's inflectional features — voice and aspectual — are not viable tools for the analysis of Amis. While Philippine-type languages can speak of voice paradigms and focus system for the

verbs, Amis resorts to different syntactic devices, specifically nominalisation and complementation, to highlight certain case-like notions. We have also shown that DeGuzman's inflectional aspect feature [±beg] (begun) and [±comp] (completed) do not have ready counterparts in Amis. Rather, aspect is manifested by aspectual verbs such as sa-terep in examples 5.8 and 5.15, which take verbal complements, and by the use of aspectual adverbs. Imperative verbs are also handled by derivation in Amis because, as will be seen in section 5.2.5.1 and section 6.3.2.5, their correspondence with non-imperative forms involves changes in syntactic features and category.

5.2 Primary Verb Classes — Subcategorisation in terms of Case Frame Features

The approach of determining verb classes on the basis of co-occurring CR's and CF's has been adopted in lexicase since its inception. Taylor in his case grammar of Japanese (1971), Li in his grammar of Rukai (1973), Kullavanijaya in her study of Thai verbs (1974), Clark in her study of Vietnamese (1978), DeGuzman in her analysis of Tagalog verbs (1978) and Fagan in his description of Mono-Alu of the Solomon Islands (1979) all utilise case frame features to determine verb classes and construction types.

Figure 2.11 in section 2.4.4 exemplifies how case frame features can be used to provide a broad subcategorisation of verbs. In our lexicase model, we have extended case frame features from (1) those contextual features of the form [+[+X]], where X represents a CR, to indicate the co-occurrence of case relation S with the verb to include (2) those contextual features of the form [+[+X],+[+Y]], where X and Y are both CR's, to indicate the co-occurrence of X and Y with the verb and (3) contextual features of the form [+[+X],-[+Y]] to indicate non-occurrence of Y in the case frame of the verb with X, and (4) those contextual features of the form [-[Z,-Y]] where Z is a CF and Y, a CR, to represent the mapping of CF and CR which is characteristic of a particular verb class. Note the convention that a CF is not marked by a "plus" or "minus" because, as has been shown in section 4.1, case forms are cover labels for a bundle of features, but not features themselves. For instance, the symbol [Nom] stands for [+nmtv,-prdc,-cntr] and [Gen] stands for [-nmtv,+drcn,+sorc] (see Figure 4.6 in section 4.3). However, like other cover labels such as [±trns] (transitive) and [±ergv] (ergative), CF labels can also be marked + or -, especially in double negation notations. When appearing unmarked, they are assumed to be positive. The double negation convention has already been described in section 2.4.4.

Classification of Amis verbs by case frame features can be shown by the tree diagram in Figure 5.1a and 5.1b. At each node is a contextual feature indicating the occurrence or non-occurrence of a particular CR in the case frame of the verbs. Additional case frame features for individual verb classes will be given under the respective subsections below.

Figure 5.1b shows two categories of impersonal verbs. Both occur in subjectless sentences. Class VII is unique in the sense that it requires the co-occurrence of a Genitive actant. Since a genitive NP signals either an Agent for ergative verbs or a possessor of a nominal form, I have chosen to treat rakat-an *walk* as a V. My choice does result in the creation of a verb class which can be descriptively labelled as impersonal ergative transitive verb. This may be quite a terminological monstrosity, but it allows me to make greater generalisations with the features of transitivity and ergativity.

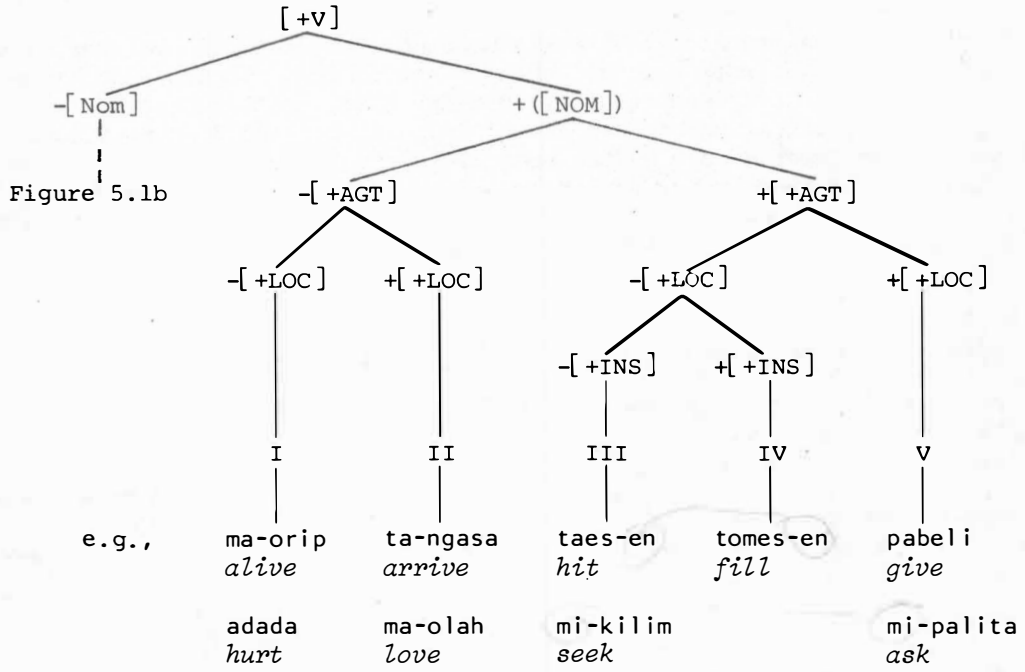


Figure 5.1a Classification of Amis Verbs in terms of Case Frame Features; with examples

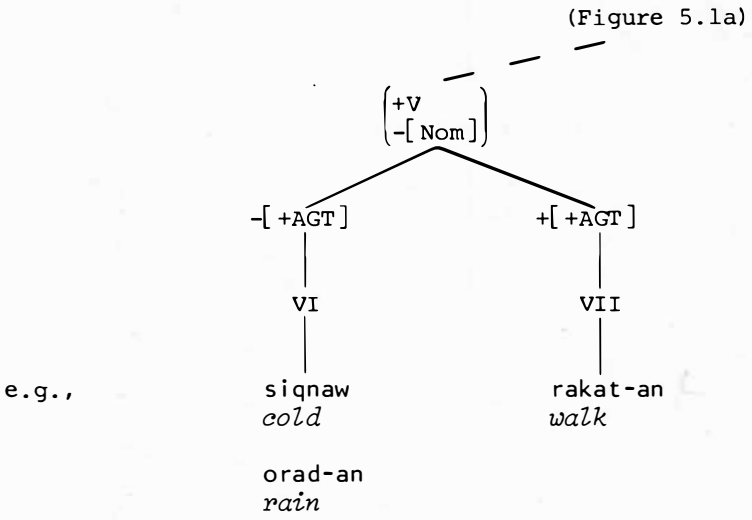


Figure 5.1b Classification of Amis Impersonal Verbs in terms of Case Frame Features; with examples

Taylor (1971:174) uses what he calls "pseudo-features" as descriptive cover labels for the characteristic case frames for the primary verb classes. His practice has been followed by other lexicase grammarians such as Clark (1978:44) and DeGuzman (1978:173) in their description of verbal classes. These descriptive labels allow for easier reference to the feature matrices while, at the same time, bridging the gap between a feature analysis and the more traditional linguistic taxonomy. I have followed DeGuzman in referring to groups of verb classes by the name of their common case relation. For example, since classes III, IV, V, and VII share the AGT case relation, they can be referred to as a group as agentive verbs. Correspondingly, those without an Agent in the case frame can be referred to as non-agentive verbs. This latter group includes verbs from classes I, II, and VI.

In the following are listed my choice of cover labels and their corresponding case frames for the seven primary verb classes presented in Figure 5.1a and Figure 5.1b:

I	Simple non-agentive	:	[+[+PAT],-[+AGT],-[+LOC]]
II	Intransitive locative	:	[+[+PAT],-[+AGT],+[+LOC]]
III	Simple transitive	:	[+[+PAT],+[+AGT],-[+LOC],-[+INS]]
IV	Transitive instrumental	:	[+[+PAT],+[+AGT],-[+LOC],+[+INS]]
V	Transitive locative	:	[+[+PAT],+[+AGT],+[+LOC]]
VI	Impersonal intransitive	:	[-[Nom],-[+AGT]]
VII	Impersonal transitive	:	[-[Nom],+[+AGT]]

Each of these classes can be further characterised and subcategorised in terms of semantic and morphological features. Then other convenient labels may be introduced. For instance, with an additional semantic feature, say, [+lctn] for "location", we can separate the location and locomotion verbs from the specific-object intransitive verbs and the psychological verbs that also have [+[+LOC]] in their case frames. Furthermore, the feature [+psch] for "psychological" can sort out the psychological verbs from the specific-object intransitives. These inherent semantic features also serve to subclassify verbs in a formal way, because they also bear morphological and syntactic consequences. Classification of verbs in terms of inherent semantic features of the verbs will be presented in section 5.3.

Verb classes VI and VII can be referred to as being "subjectless" or "impersonal" if we are paying attention to the non-occurrence of the Nominative CF. It follows that the fundamental case relation PAT is absent in the case frame. The sequence of reasoning can be outlined as follows:

1. These verbs are ergative.
2. Ergative verbs take only PAT subjects.
3. These verbs do not require the co-occurrence of the Nominative case form.
4. Therefore, there is no PAT in their case frame.

The traditional notions of intransitive, transitive, and ditransitive verbs are closely tied in to our understanding of case frame features. Transitive verbs are characterised by the presence of the AGT case relation. Therefore, classes III, IV, V, and VII can be collectively referred to as transitive verbs. Correspondingly, those without an AGT in the case frame can be referred to as intransitive verbs. This latter group includes verbs from

classes I, II, and VI. The notion of ditransitive verbs implies the presence of a "direct object" and an "indirect object". In Amis, class V transitive locative verbs are the only candidates for the ditransitive verb category.

In this study, I have extended the set of case frame features to include those contextual features which represent the characteristic mapping patterns of CF's and CR's for a particular verb or verb class. These contextual features either take on the form [+[+X],+[+Y]] where X and Y are both CR's, such as Patient and Agent, or take on the form [-[Z,-Y]], where Z is a CF and Y, a CR. As has been described in section 2.4.4 above, the double negation notation means that if the CF Z is present, it is necessarily with the CR Y. Specifically, when Z equals the Nominative case form, this notation would imply that only the CR indicated by Y can be realised in the Nominative, that is, chosen as subject. It is possible to specify more than one such contextual feature so that the mapping of CF and CR in two or more nominal actants can be jointly referred to for the explicit characterisation of certain verbs or verb classes.

These extended case frame features formally characterise the notions of transitivity and ergativity. Transitivity, in this study, is defined in terms of the co-occurrence of two CR's, PAT and AGT, and perhaps PAT and INS. The definition of ergativity is related to the association between CF's and CR's, specifically, the association of the Nominative CF with the Patient CR in transitive verbs, and the association of the Genitive CF with the Agent or Instrument. The co-occurrence restriction between the Nominative CF and all available CR's is also known as "subject choice". Ergative verbs always have a Patient subject.

If we redefine the case feature association [+[+PAT],+[+AGT]] as [+trns] (transitive) and the CF-CR association [-[Nom,-PAT]] in the presence of a Genitive Agent as [+ergv] (ergative), we can subcategorise verbs from the perspective of subject choice, splitting the transitive verb classes III, IV, and V each into non-ergative (accusative) and ergative subclasses as shown in Figure 5.2.

The feature [±trns] and [±ergv] are what Taylor would call "pseudo-features" (Taylor 1971:174) because they are just convenient cover labels that stand for a collection of features. In this study, the feature [+trns] implies the contextual feature [+[+AGT]] while [-trns] covers the non-agentive verbs. The feature [+ergv] represents the implicational relations [-[Nom,-PAT]] and [-[Gen,-AGT]], while [-ergv] covers those transitive verbs that do not allow Patient subject. If we extend the meaning of [+ergv] to mean [-[Nom,-PAT]] and/or [-[Gen,-AGT]], then all intransitive verbs would be ergative and both impersonal verb classes VI and VII would also be ergative. Class VII is transitive because of the presence of [+[+AGT]], and class VI is intransitive.

Amis is a mixed ergative or a split ergative language in the sense that the language has transitive verbs belonging to the ergative type as well as the non-ergative or accusative type. For example, there are ergative verbs like melaw-en *watch* and ma-melaw *see* whose co-occurring AGT is in the Genitive while the co-occurring PAT is always in the Nominative. At the same time, the language has verbs that obey Fillmore's subject choice hierarchy for accusative languages. That is to say, there are verbs that would always take AGT subject if an AGT is present, otherwise they would take INS subject provided that an INS is present. If neither AGT nor INS is present, then, PAT gets to be the

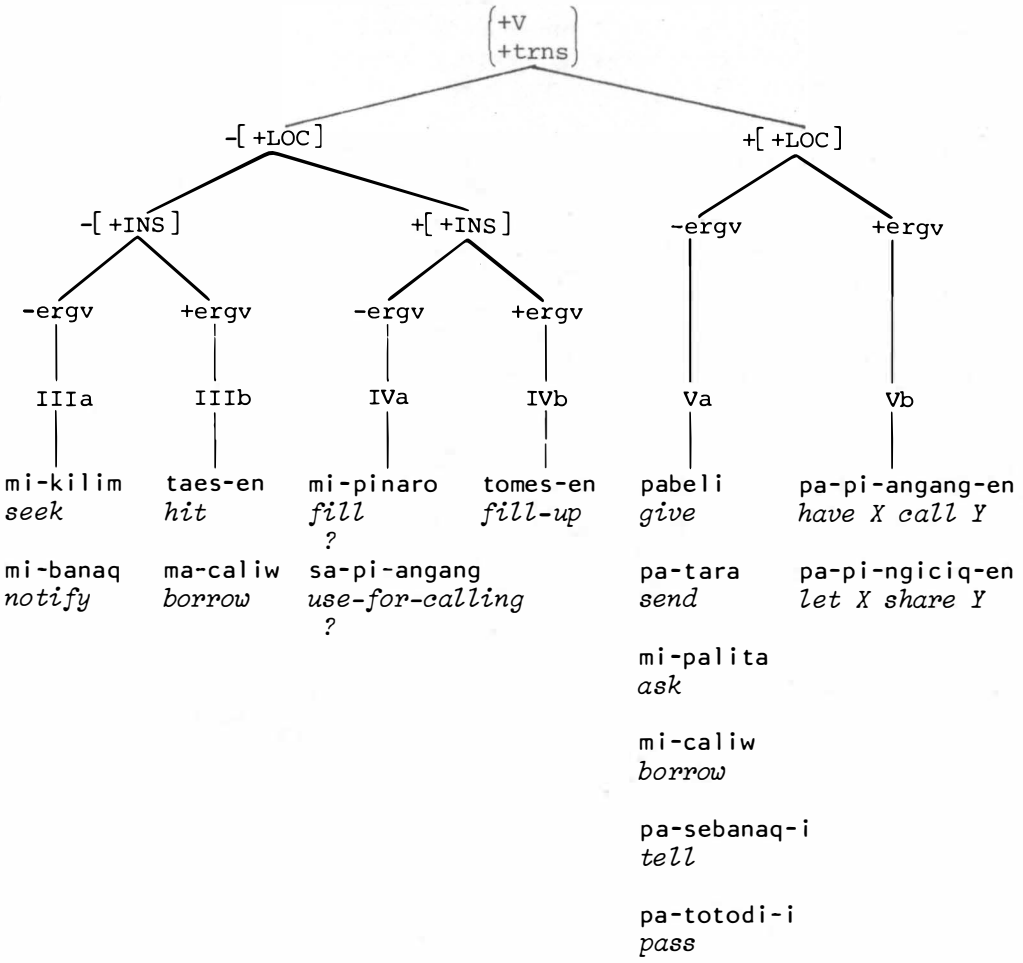


Figure 5.2 Cross-classification of Transitive Verbs with the Feature of Ergativity; with examples

subject. But in the latter case when no AGT nor INS is present, the verb is intransitive and the notion of ergativity is non-distinctive; that is, for both ergative and accusative languages, the subject of intransitive sentences is always PAT.

The Amis language seems especially sensitive about crowding of its case frames, possibly because of the very limited inventory of distinct case forms. In a simple sentence, the maximum number of co-occurring actants is three. Verb classes which already have three CR's in their case frames cannot derive into another verb class by adding another CR to their case frames. For example, causativisation of the transitive locative verbs in verb class V is thus done by the syntactic means of sentence complementation rather than by morphological means which involves verbal affixation and the addition of a CR, since the case frame of class V is already saturated with three CR's, namely, PAT, AGT, and LOC. The same applies to the causativisation of the transitive instrumental verbs in class IV, whose characteristic case frame is also saturated with three

CR's. An explanation for this behaviour follows from the 1/Sent constraint and the absence of COR in the case inventory of Amis, though that still does not explain the absence of a class of [+[+PAT],+[+AGT],+[+LOC],+[+INS]] verbs in Amis.

Agentive verbs normally implies the co-occurrence of an optional INS. But in the case of verb class V, there is no room for the optional expansion, so the notional instrument has to be incorporated in a verb form which holds a complementising relation with the agentive verb. Possibly the causal relationship goes in the other direction: the higher verbs are available to express the notion of instrument, so it need not be expressed (ambiguously) as an INS on the verb. Here is a typical example:

(5.17) si-bakic kia babahi a [mi-radom to nanom i tebom]
use-bucket *woman* *draw-from* *water* *well*
[+V] (Nom, +PAT) (+V, -fint) (Acc, +PAT) (Lcv, +LOC)
the woman draws water from the well with a bucket

The incorporated notional instrument in this example is indefinite. If the notional instrument has a definite reference, a different syntactic device is employed. Consider the following example:

(5.18) na o maan saw ko sa-pi-bohat nomiso tia panan?
did *what* QM *means-for-opening* 2s *door*
(+V, +past) [Neu] (+N, Nom, +PAT) (Gen, +AGT) (Acc, +PAT)
with what did you open the door?
Lit. *what was your means for opening the door?*

(5.19) na o itini-an a cokcok ko sa-pi-bohat
did *this-one* *key* *means-for-opening*
(+V, +past) [Neu] (+N, Nom, +PAT)

ako tia panan
1s *door*
(Gen, +AGT) (Acc, +PAT)
I opened the door with this key

Examples 5.18 and 5.19 show that notional instruments with definite referents are expressed by NP-NP constructions with a nominalised form which implies the notion of instrument, as in sa-pi-bohat *means-for-opening*, acting as the subject NP.

Both the complementation and the nominalisation devices are syntactic rather than morphological mechanisms for adding case-like notions to a sentence. While the situation expressed by the sentence may include more than three case-like notions, only a maximum of three may be expressed as overt case relations in the case frame of a single head verb. The remainder of case-like notions would have to be expressed by other syntactic devices. In Chapter 3, under the Ramification sections of each case relation, I have given many examples in Amis showing that many case-like notions, especially those associated with the outer case relations, such as place, time, manner, and referent (or benefactive)

find their expressions as predicates of verbal constructions with an obligatory sentence complement, or as predicates of NP-NP constructions in which the head nouns are derived forms that imply the case-like notions concerned.

Amis verbs with two or less CR's, i.e., with unsaturated case frames, have the potential of taking on an optional CR such as PLC or TIM. This added CR then becomes part of the case frame. Class IV (transitive instrumental) and class V (transitive locative) verbs would have to be explicitly marked [-[+PLC]] and [-[+TIM]] in order to block the application of the RR which introduces these optional outer CR's. In addition to this, class IV verbs would have to be explicitly marked [-[+LOC]] and class V verbs marked [-[+INS]] so that the negatively marked CR may not be introduced to their already saturated case frames. One syntactic consequence of this negatively marked contextual feature is the necessity of resorting to a verbal complementation strategy if, say, a notional instrument is to be expressed with a class V verb. In other words, the negative marking forces the verb to use the complementation device. This choice between verbal complementation and an additional CR to the case frame provides another means to cross-classify Amis verbs.

Generally speaking, an outer CR like PLC or TIM is not used for the primary subcategorisation of verbs. The presence or absence of an outer CR, however, does provide secondary, if not redundant information for subcategorisation. For instance, while agentive verbs use the syntactic devices that express place and time as predicates of NP-NP constructions augmented by sentence complements, impersonal verbs do not as a rule utilize verbal complementation device to express the notions of location in space and time. Impersonal verbs express place and time within the case system, using the outer case relation PLC and TIM respectively.

The primary verb classes and their immediate subclasses as shown in Figure 5.1a, 5.1b, and 5.2 can be arrived at by the following set of subcategorisation rules:

SR-1 $[+V] \rightarrow \begin{pmatrix} \pm fint \\ \pm\_\_[-fint] \end{pmatrix}$

SR-2 $[-\_\_[+fint]] \rightarrow \begin{pmatrix} \\ \pm\_\_\begin{pmatrix} +N \\ Neu \end{pmatrix} \end{pmatrix}$

SR-3 $\begin{pmatrix} +V \\ +fint \end{pmatrix} \rightarrow [\pm[Nom]]$

SR-4 $\begin{pmatrix} +V \\ +fint \end{pmatrix} \rightarrow \begin{pmatrix} \pm[+PAT] \\ \pm[+AGT] \end{pmatrix}$

SR-5 $\begin{pmatrix} +V \\ +[+PAT] \end{pmatrix} \rightarrow [\pm[+LOC]]$

SR-6 $\begin{pmatrix} +V \\ +[+PAT] \\ -[+LOC] \end{pmatrix} \rightarrow [\pm[+INS]]$

SR-7 $\begin{pmatrix} +V \\ +[+AGT] \end{pmatrix} \rightarrow [\pm ergv]$

These SR's are to be preceded by the following redundancy rules:

RR-1 $\begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ +[+LOC] \end{bmatrix} \rightarrow [-[+INS]]$

RR-2 $\begin{pmatrix} +V \\ \begin{pmatrix} +[+AGT] \\ +[+INS] \end{pmatrix} \end{pmatrix} \rightarrow [+trns]$

RR-3 $[+ergv] \rightarrow \begin{bmatrix} -\begin{pmatrix} Nom \\ -PAT \end{pmatrix} \\ -\begin{pmatrix} Gen \\ -AGT \end{pmatrix} \end{bmatrix}$

RR-4 $\begin{pmatrix} +ergv \\ -[Nom] \end{pmatrix} \rightarrow [-[+PAT]]$

SR-1 gives us the sets of finite and non-finite verbs, each with or without verbal complements. SR-2 distinguishes the verbs with or without nominal complements. SR-3 takes the simple finite verbs and subcategorises them according to the presence or absence of the Nominative case form. -[Nom] verbs are subjectless or impersonal verbs. SR-4 takes the simple finite verbs and subcategorises them according to the contextual features ±[+PAT] and ±[+AGT]. Verbs characterised by the case frame of [+[+PAT],-[+AGT]] constitute the non-agentive verb classes I and II. Verbs with the case frame of [+[+PAT],+[+AGT]] constitute the agentive verb classes III, IV, and V. Verbs with [-[Nom],-[+AGT]] or redundantly the case frame of [-[+Nom],+[+AGT]] or [-[+PAT],+[+AGT]] belong to class VII impersonal verbs. SR-5 subcategorises the non-agentive verbs into subclasses I and II, and the agentive verbs into subclass V as opposed to subclasses III and IV. SR-6 breaks down the group of non-locative agentive verbs into subclasses III and IV according to the contextual feature [±[+INS]]. Finally, SR-7 cross-classifies all agentive verbs with the feature [±ergv] (ergative), giving us subclasses IIIa and IIIb for the simple transitive verbs, subclasses IVa and IVb for the transitive instrumental verbs, and subclasses Va and Vb for the transitive locative verbs.

The redundancy rules reiterate the non-admittance of a fourth CR in the saturated case frame (RR-1), and the definitions of transitivity (RR-2) and ergativity (RR-3). RR-4 follows from RR-3 that if an ergative verb does not have a subject, it does not have a co-occurring PAT either.

5.2.1 Simple Non-Agentive [+[+PAT],-[+AGT],-[+LOC]]

This class of verbs show only one positively marked CR, namely, PAT, in their case frame. Since there is room for more CR's in their unsaturated case frame, these non-agentive verbs can be subcategorised by the contextual feature [±[+INS]]. If no INS is added, we have the simple intransitive verbs grouped under class Ia in Figure 5.2 below. If an INS is added, we have by definition of transitivity a group of non-agentive transitive verbs. In section 5.2.3 below, non-agentive simple transitive verbs will be further subcategorised by the feature [±ergv] (ergative), resulting in an accusative (class IIIc) and an ergative (class IIId) subclass of verbs.

The following feature tree will show how simple intransitive verbs and non-agentive simple transitive verbs are parcelled out from the class of simple non-agentive verbs by SR-4:

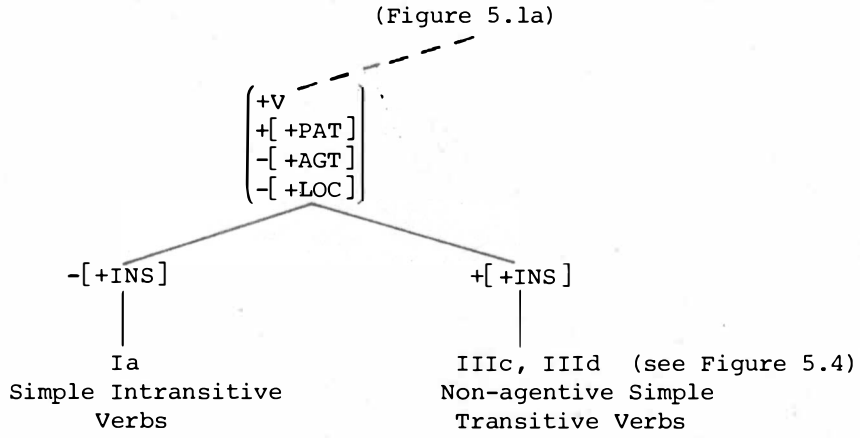


Figure 5.3 Subcategorisation of Class I Simple Non-Agentive Verbs

Classes IIIc and IIId clearly illustrate the point that not all transitive verbs are agentive. We shall return to these verbs in section 5.2.3.

In this section we will limit our presentation to class Ia, the simple intransitive verbs. In terms of morphological shape and intrinsic semantic features, this is a highly heterogeneous group. What binds the members together is their common characteristic case frame, which is [+[+PAT],-[+AGT],-[+LOC],-[+INS]]. Included in this category of simple intransitive verbs are the following groups of verbs:

(1) simple action verbs characterised by the infix -em-. Examples include:

t-em-ireng	*stand*
t-em-angic	*weep, cry*
r-em-adiw	*sing*
r-em-akat	*walk*
k-em-aen	*eat*
l-em-oad	*rise, get up*

(2) involuntary action verbs marked by ma- such as:

ma-tepo	*fall*
ma-korokor	*roll*
ma-kelol	*abate (of the wind)*

(3) meteorological verbs also marked by ma-. Examples include:

ma-orad	*rainy*
ma-bali	*windy*
ma-kotem	*cloudy*

(4) phenomenal or meteorological verbs marked by the suffix -an:

orad-an	*rain*
bali-an	*blowing (of the wind)*
balios-an	*typhoon, gale*
betili-an	*thunder-storm*
lelen-an	*earthquake*
lelesi-an	*flood*

(5) stative verbs marked by the prefix ma-. Examples of verbs indicating psychological or mental state include:

ma-olah	*pleased, happy*
ma-cekok	*amazed, surprised*
ma-calibad	*angry*
ma-canaran	*annoyed*
ma-talaw	*frightened*
ma-qinal	*envious*
ma-ngodo	*embarrassed*

Examples of verbs indicating physical state include the following:

ma-orip	*alive*
ma-patay	*dead*
ma-toas	*grown up*
ma-soso	*fat*
ma-kopit	*skinny*
ma-botek	*blind*
ma-latoq	*fragile*
ma-kedal	*dry*
ma-dicem	*short*
ma-talem	*sharp*
ma-lahol	*rotten*
ma-lepot	*broken*
ma-ngangiq	*ajar*
ma-kadep	*united*

(6) ambient verbs that indicate the state of the encompassing atmospheric environment, especially in regard to climate and darkness or light with reference to the time of the day. These verbs appear in their root form. It is interesting to note that these unaffixed verbs all show a CVCCVC syllable structure. Examples include:

toqman	*dark*
tanglal	*light, daylight*
siqnaw	*cold*
caldes	*warm*
soqmed	*humid*

(7) descriptive verbs expressing physical quality. Members of this group also appear in their root form. These verbs indicate the size, shape, colour, weight, etc. of physical objects. Many of these verbs also show the CVCCVC syllable structure. Examples include:

adidiq	*small*
tataang	*large*
arawraw	*round*
baqkec	*heavy*
tarakaw	*tall*
lahkak	*red*
langdaw	*blue, green, azure*
bohcal	*white*
coplak	*sour*
ahcid	*salty*
asoq	*delicious*
kapah	*good*
bangcal	*beautiful*

(8) descriptive verbs derived from nouns. Qualities of the source nouns are carried over to the derived verbs. The characteristic prefix is si-, which is used also to indicate an object in existence or in the possession of the Patient subject. Examples of si-N descriptive verbs include:

si-pida	*rich,*	lit.	*have-money*
si-ngangan	*famous,*	lit.	*have-name*
si-kawas	*haunted,*	lit.	*have-ghost*
si-kotem	*cloudy,*	lit.	*have-cloud*
si-wawa	*child-ed,*	lit.	*have-child*
si-oning	*filthy,*	lit.	*have-dirt*

The prefix si- combines rather freely with any concrete noun to give a straight-forward meaning of possession. Further examples are:

si-nani	*have-cat*
si-lomaq	*have-house*
si-alopal	*have-persimmon*

The subject of a si-N verb can also refer to a place. In that case, instead of a possessive reading, it resumes the meaning of existence. Compare the following pair of examples:

(5.20a) si-nani kako
have-cat ls
$\begin{pmatrix}+V\\-trns\end{pmatrix}$ $\begin{pmatrix}Nom\\+PAT\end{pmatrix}$
I have a cat

(5.20b) si-lokedaw ko niaroq no Kalenko
exist-wildcat *place* *of* *Hualien*
$\begin{pmatrix}+V\\-trns\end{pmatrix}$ $\begin{pmatrix}Nom\\+PAT\end{pmatrix}$ (Japanese loan)
there are wildcats in the neighbourhood of Hualien

Related to the si-N verbs in this group are the subjectless si-N verbs which have an exclusive existential reading. For example, si-kawas means *God exists* or *ghosts exist/there are ghosts.* These subjectless verbs belong to class VI impersonal verbs described in section 5.2.6 below.

(9) si-N verbs that imply instrument or tool. These verbs are usually followed by a verbal complement indicating the action for which the implied instrument is used. Examples include:

si-bakic	*use-a-bucket*
si-lakaw	*use-a-stick*
si-tokar	*use-a-ladder*
si-raic	*use-a-rope*
si-losa	*use-tears*

(10) verbs that indicate existence or non-existence of the referent of the Patient subject. This group has only two members, namely,

era	*exist, there is*
awaay	*exist-not, there is not*

(11) The existential verbs era *there is* and awaay *there is not*, when used with a Patient subject that is modified by a genitive noun or pronoun, also serve to signal possession. The possessed entity is manifested as the Patient subject. Compare the following pair of examples:

(5.21a) si-nani kia babahi
have-cat *woman*
[+V, -trns] [Nom, +PAT]
the woman has a cat

(5.21b) era ko nani nia babahi
exist *cat* *of* *woman*
[+V, -trns] [Nom, +PAT]
the woman has a cat.
Lit. *a cat of the woman's exists*

(12) verbs that indicate number or quantity. Included in this set are the cardinal numbers, in their root form or partially reduplicated. Examples are:

(5.22a) tosa ko ayam
two *bird*
[+V, -trns] [Nom, +PAT]
there are two birds
Lit. *the birds are two (in number)*

(5.22b) ta-tosa ko ayam
two *bird*
[+V, -trns] [Nom, +PAT]
there are two birds
Lit. *the birds are two (in number)*

(5.23) cacay ko kawas
one *God*
[+V, -trns] [Nom, +PAT]
there is (only) one God
Lit. *God is One*

The existential verbs era *there is* and awaay *there is not* can be looked upon syntactically and semantically as special cases of number verbs with awaay indicating the number zero and era indicating an unspecified number n, where n ≥ 1.

(13) verbs derived from nouns that are affected by the action. These intransitive verbs have implied objects. Exactly how these objects are affected is not predictable. Some imply acquisition, others, the disposal or consumption of the object. Examples are:

mi-kasoy	*gather-firewood*
mi-tipos	*harvest,* lit. *gather-rice-grains*
mi-boting	*catch-fish*
mi-icep	*chew-betel-nut*
mi-tabako	*smoke-tobacco*
mi-pociq	*peel-skin (of fruit)*
mi-coqcoq	*suck-at-nipple*
mi-nanom	*drink-water*
mi-kabi	*drink-soup*
mi-panaq	*shoot-arrow*

(14) verbs derived from nouns that are the product of creative activities. These verbs also have implied objects. Examples are:

misa-qepah	*make-wine*
misa-toron	*make-rice-cake*
misa-kabi	*make-soup*
misa-kalabi	*make-dinner*
misa-lomaq	*build-house*
misa-ribeng	*build-embankment*
misa-osiq	*count-numbers*
misa-banaq	*make-belief, deceive*
misa-bera-berang	*put-on-airs, arrogant*
misa-kero	*dance*
misa-tamdaw	*make-friends*

(15) locomotion verbs with implied direction or goal. Examples include:

ta-ini	*come, arrive*
ta-ra (<ta-ira)	*go (there)*
ta-lomaq	*go home*

(16) verbs indicating mutual or reciprocal activities. These verbs are marked either by masa- or mal-.

masa-soal	*converse with each other*
masa-cepcep	*kiss each other*
masa-skong	*fight each other*
masa-sorahid	*fire at each other*
mal-kaliay	*reconcile*
mal-qapa	*put arms around each other's shoulder*
mal-alip	*intercourse*

The prefix mal- also marks verbs indicating activity participated in by two or more people.
Examples are:

mal-taes	*hit/fight one another*
mal-qepah	*drink together*

Verbs with the prefix mal- can also be derived from nouns whose referents are the group participants.
Examples are:

mal-kaka	*be with elder sibling*
mal-wina	*be with mother*
mal-hetay (Japanese loan)	*be with the army*

These verbs with implied concomitants require plural subjects. They behave like manner verbs in that they take a non-finite action verb as their obligatory complement, or, they can serve as the non-finite complement of an action verb.

In section 5.3 below, we shall subcategorise class Ia, as well as other heterogeneous verb classes, in terms of inherent semantic features. Subcategorisation will be carried on until variations in syntactic and morphological patterns within each major category are formally and adequately accounted for.

Listed below are sentence examples for the simple intransitive verbs of class Ia.

(3.85) t-em-ireng anini cira i tepar no salili
stand *now* 3s *side* *of post*
[+V, -trns] [+Adv] [Nom, +PAT] [Lcv, +LOC]
he is standing by the/a post

(5.24) ma-korokoro anini kia bekeloq [ta-ra i sasa no lotok]
roll *now* *the stone* *go-toward* *bottom of hill*
[+V, -trns] [+Adv] [Nom, +PAT] [+V, -fint] [Lcv, +LOC]
the stone is rolling downhill

(5.25) orad-an kina remiad
rain *this* *day*
[+V, -trns] [Nom, +PAT]
it is raining/rainy today
Lit. *today is raining/rainy*

(5.26) ma-calibad kia matoas-ay
angry *the* *old-one*
[+V, -trns] [Nom, +PAT]
the old man is upset

(5.27) ma-patay to kia rarapa
dead *already* *the* *water-buffalo*
[+V, -trns] [+Adv] [Nom, +PAT]
the water buffalo is dead

(5.28) ma-ngangiq ko sasingaran
ajar *window*
[+V, -trns] [Nom, +PAT]
the window is ajar

(5.29) arawraw ko bolad i na-cila
round *moon* *yesterday*
[+V, -trns] [Nom, +PAT] [Lcv, +TIM]
the moon was full last night

(5.30) si-kawas kina lomaq
haunted *this* *house*
[+V, -trns] [Nom, +PAT]
this house is haunted

(5.31) era ko kawas
exist *God, ghost*
[+V, -trns] [Nom, +PAT]
God exists
or, *there are ghosts*

(5.32) awaay ko kawas
exist-not *God, ghost*
[+V, -trns] [Nom, +PAT]
God does not exist
or, *there are no ghosts*

(5.33) na [mi-kasoy kami (i) na-cila
did *gather-firewood* lexcl *yesterday*
[+V, +fint] [+V, +fint] [Nom, +PAT] [Lcv, +TIM]

i beliq nina lotok]
beyond *this* *hill*
[Lcv, +PLC]
we gathered firewood yesterday beyond the back of this hill

(5.34) mi-boting kami i tarawadaw
catch-fish lexcl *river*
[+V, -trns] [Nom, +PAT] [Lcv, +PLC]
we go fishing in the river

(5.35) misa-ribeng kami itini
build-embankment lexcl *here*
[+V, -trns] [Nom, +PAT] [Lcv, +PLC]
we are building an embankment here

(5.36) masa-sorahid kia tatosa-ay a tamdaw
fire-at-each-other *two* *man*
[+V, -trns] [Nom, +PAT]
the two men fired at each other

(5.37) mal-taes kia adiwawa itia potal-an
fight/hit-one-another *children* *yard*
[+V, -trns] [Nom, +PAT] [Lcv, +PLC]
the children are fighting (together) in the yard

(5.38) malqepah amin ko binawlan i taloq-an
drink-together *all* *villagers* *community-house*
[+V, -trns] +Adv [Nom, +PAT] [Lcv, +PLC]
all the villagers drink together in the community house

To top the list of simple intransitive verbs, we have the interrogative verbs ma-maan and masa (which probably came from ma-saan). These verbs can roughly be translated into English as *how-is-it-going?* and they are used to seek information about the state of being the Patient subject is in. Sentence examples are:

(5.39) ma-maan saw kiso?
how-do QM 2s
[+V, -trns] [Nom, +PAT]
how are you doing/feeling?
or, *what's happened to you?*

(5.40) ma-sa saw kiso?
how-do QM 2s
[+V, -trns] [Nom, +PAT]
how are you doing/feeling?
or, *what's happened to you?*

The wide range of possible answers to these two questions reflects the wide coverage of ma- verbs in Amis. The answer may focus on a physical state, a psychological state, a change of state, or a simple motion.

5.2.2 Intransitive Locative [+[+PAT],-[+AGT],+[+LOC]]

In our Amis data, there are no instances of LOC co-occurring with INS in the case frame of agentive and non-agentive verbs alike. Even though members of class II show an unsaturated case frame with only two CR's, class II is not further subcategorised in terms of the contextual feature [±[+INS]]. As a matter of fact, to class II intransitive locative verbs, the contextual feature -[+INS] is to be redundantly added. The following two redundancy rules show that the two CR's, INS and LOC, are mutually exclusive in the same case frame.

RR-5a [+[+LOC]] → [-[+INS]]

RR-5b [+[+INS]] → [-[+LOC]]

As has been mentioned before, a negatively marked contextual case relation would imply that the language would resort to a complementation device if that particular case notion needed to be explicitly expressed.

Like class Ia simple intransitive verbs, class II is also a neterogeneous group. There is no unique characteristic affix nor semantic interpretation. What binds the members together is their common characteristic case frame, which is [+[+PAT],-[+AGT],+[+LOC],-[INS]]. Included in this category of intransitive locative verbs are the following three groups:

(1) locomotion verbs characterised by the prefix ta- as in the following examples:

ta-ra (<ta-ira)	*go (there)*
ta-ini	*come, arrive*
ta-ngasa	*go-up-to*
ta-tihi	*go-against, oppose*
ta-ra-potal	*go-outside*
ta-todo	*go-in-between*
ta-lomaq	*go home*

(2) verbs indicating existence and/or number in a specified universe or location. These verbs are related to the existential verbs in class Ia. They include the two existential verbs as well as the cardinal numbers with or without reduplication. This group includes the following verbs:

era	*there is, there are some*
awaay	*there is not*
tosa, ta-tosa	*there are two*
lima, la-lima	*there are five*

(3) specific-object intransitive verbs. In sections 3.1.3.1 and 3.4.3.4 we have shown that in Amis non-specific objects are realised as Accusative Patient while specific objects are realised as Locative Locus. In the latter case, the verb is de-transitivised. The specific-object intransitive verbs include action verbs as well as psychological verbs. Derivation prefixes are mi- and ma- respectively. Examples include:

mi-kilim	*seek, look-for*
mi-alod	*throw-at*
mi-angang	*call*
ma-olah	*like, love*
ma-calibad	*angry-at*
ma-canaren	*annoyed*
ma-talaw	*afraid-of*

The ma- verbs in this group are derivationally related to the psychological stative verbs in class Ia which are also marked by the ma- prefix. The derivational relation of this group of class II verbs with class Ia simple intransitive verbs on the one hand and with class IIIa simple transitive verbs on the other will be shown in Chapter 6 (section 6.3.2.3).

Listed below are sentence examples for the intransitive locative verbs of class II.

(3.83) ta-ngasa cira i panan a [mi-dakaw]
go-up-to 3s *gate* *ride*
[+V, +fint, -trns] [Nom, +PAT] [Lcv, +LOC] [+V, -fint]
he rode up to the gate

(5.41) na [ta-ra cira itia pacakay-ay]
did *go* 3s *market*
[+V, +fint, +xlry] [+V, +fint, -trns] [Nom, +PAT] [Lcv, +LOC]
she went to the market

(5.42) era ko tamdaw i likot no sasinaran
there-is *person* *outside of window*
[+V, -trns] [Nom, +PAT] [Lcv, +LOC]
there is someone outside of the window
or, *someone is outside of the window*

(5.43) awaay ko oner i Hawaii
there-is-not *snake* *Hawaii*
[+V, -trns] [Nom, +PAT] [Lcv, +LOC]
there are no snakes in Hawaii

(5.44) mi-alod cira itakoan
throw-at 3s 1s
[+V, -trns] [Nom, +PAT] [Lcv, +LOC]
he is throwing (things) at me

(5.45) mi-angang to haw kiso iciraan?
call *already* QM 2s 3s
[+V, -trns] [+Adv] [Nom, +PAT] [Lcv, +LOC]
have you called him?

(5.46) ma-olah kako itisoan
like, love 1s 2s
[+V, -trns] [Nom, +PAT] [Lcv, +LOC]
I love you

(5.47) ma-calibad kia matoas-ay ici Panay-an
angry-at *old-one* *Panay*
[+V, -trns] [Nom, +PAT] [Lcv, +LOC]
the old man is angry at Panay

(5.48) ma-talaw kako tira tamdaw-an
afraid-of 1s *that* *man*
[+V, -trns] [Nom, +PAT] [Lcv, +LOC]
I am afraid of that man

5.2.3 Simple Transitive [+[+PAT],+[+AGT],-[+LOC],-[+INS]]

Transitive verbs can be subcategorised in terms of the extended case frame feature now labelled as [±ergv] (ergative), with ergativity formally defined as the permanent association of the Nominative CF with the Patient CR and the association of the Agent or Instrument with the Genitive CF. Cross-classification of Amis transitive verbs with the feature of ergativity has given us accusative and ergative subclasses for verb classes III, IV, and V (cf. Figure 5.2). In section 5.2.3.2 below, we will present class IIIa, the simple accusative transitive verbs with Agent subject together with class IIIc, the simple accusative transitive verbs with Instrument subject. In section 5.2.3.2, class IIIb and class IIId, the simple ergative transitive verbs with Genitive Agent and Genitive Instrument respectively, will be presented. Classes IIIc and IIId are distinguished by the feature +[+INS] (see SR-6 and Figure 5.3 in section 5.2.1).

5.2.3.1 Accusative Simple Transitive

Class IIIa from Figure 5.2 are the non-ergative or accusative simple transitive verbs. Accusative transitive verbs in Amis have the characteristic prefix mi-. With these verbs, PAT is typically realised in the Accusative case form, corresponding to the traditional notion of "direct object". As has been discussed in section 3.1.3.1, Accusative Patient in Amis is associated with a non-specific object. Examples are:

(5.49) mi-qosaw to haw kamo to hemay ni Apoy?
save *already* QM 2pl *rice* *of* *Apoy*
[+V, +trns, -ergv] [+Adv, +sptl, +cmpl] [Nom, +AGT] [Acc, +PAT]
have you saved some rice for Apoy?
or, *have you saved some of Apoy's rice?*

(5.50) mi-ala kia wama tia nani
get, rescue *father* *cat*
[+V, +trns, -ergv] [Nom, +AGT] [Acc, +PAT]
the father rescues the cat

(5.51) mi-kilim kako to badal
look-for ls *berries*
[+V, +trns, -ergv] [Nom, +AGT] [Acc, +PAT]
I am looking for berries

(3.27) mi-kilim kako to boting
look-for ls *fish*
[+V, +trns, -ergv] [Nom, +AGT] [Acc, +PAT]
I am looking for a/some fish

If we refer back to section 3.1.3.1, we can see that Accusative Patient is associated with the less specific referents in the feature gradation presented in Figure 3.1. It is to be noted that specificity is not to be equated with definiteness. In fact, in standard terminology, they are mutually exclusive terms, with "specific" meaning that the referent is clear in the minds of both the speaker and the hearer and "definite" meaning that the speaker assumes and asserts that the referent is clear only in the mind of the speaker. My use of these terms deviates somewhat from the standard usage, in that I allow the feature [+dfnt] (definite) to be reinterpreted as specific when the features [+lctn] (location), [+prsn] (person), and [+prnn] (pronoun) are added to the feature matrix. The degree of specificity increases as these features are added on one at a time in the order cited. As has been mentioned earlier in section 3.1.3.1, my definition of specificity comes closest to what Hopper and Thompson would call "individuated" (1980:253, 287). Since examples 3.27-3.30 have clearly illustrated this point, we are not going to repeat them here.

It is perhaps important to point out, however, that the gradual shift from non-specific to specific and the corresponding direction of change from transitive to intransitive and from Accusative Patient to Locative Locus in Amis will upset some linguists. Hopper and Thompson (ibid.:253), for instance, would think that the more specific the object is, the "more" transitive the verb should be. Also, when Accusative Patient changes into Locative Locus, with appropriate adjustment in CR-assignment, the verb becomes intransitivised in the process and takes a Patient subject. That would satisfy the definition of an anti-passive derivation process, although anti-passives usually have less specific rather than more specific objects. According to Starosta (Personal communication), this kind of ∅-marked anti-passive is unheard of in his experience. To the extent that the Amis data are accurate and I have no better way to account for the pattern exhibited there, I would have to conclude that this is an anti-passive process which involves the notion of specificity.

Referring back to Figure 5.3 in section 5.2.1, we find that if we subcategorise class I non-agentive verbs with the contextual feature [±[+INS]], we will get an intransitive [+[+PAT],-[+AGT],-[+LOC],-[+INS]] subclass and a transitive [+[+PAT],-[+AGT],-[+LOC],+[+INS]] subclass. The latter subclass can be descriptively labelled the simple non-agentive transitive verbs. A further subcategorisation of these non-agentive transitive verbs by the feature [±ergv] (ergative) gives us subclasses IIIc and IIId, the former accusative and the latter, ergative. This can be formulated into SR-8 below:

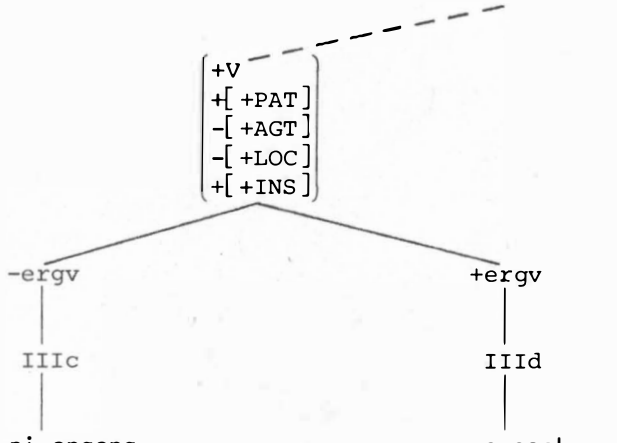
(5.52) SR-8 $\begin{pmatrix} +[+PAT] \\ -[+AGT] \\ +[+INS] \end{pmatrix} \rightarrow [\pm ergv]$

and shown by Figure 5.4 (on page 191).

Class IIIc are the non-agentive accusative transitive verbs which obey the Fillmorean subject choice hierarchy. In the absence of an Agent, Instrument is chosen as subject. The verbs in examples 3.54-3.56 in section 3.3.2.1 belong to this class. The characteristic case frame is [+[+PAT],-[+AGT], -[+LOC],+[+INS],-ergv]. I will repeat only example 3.55 to illustrate the feature specification of the verb and its context. More examples of class IIIc can be found in section 3.3.2.1 under Nominative Instrument.

(3.55) mami-asik cira to adawang no cacodadan
assigned-to-sweep 3s *front* *school*
[+V] (Nom, +INS) (Acc, +PAT)
he is assigned to sweep the front of the school

(Figure 5.3)



e.g.

IIIc	IIId
sa-pi-angang *used-for-calling-someone*	ma-asek *strike*
sa-pa-ahcid *used-for-making-something-salty*	ma-noang *move, wave*
mami-asik *assigned-to-sweep*	ma-apa *dumbfound*

Figure 5.4 Subcategorisation of Non-Agentive Transitive Verbs with the Feature of Ergativity; with examples

5.2.3.2 Ergative Simple Transitive

By definition, an ergative transitive verb has a Patient subject and a co-occurring Agent or Instrument in the Genitive form. The ergative simple transitive verbs with Genitive Agent belong to class IIIb from Figure 5.2. In section 3.2.2.2 we have given examples of class IIIb ergative transitive verbs with the prefix ma- (see examples 3.42-3.43). A few more examples are given below:

(5.53) ma-ala nomiso ko bodoy ako
taken (by mistake) 2s *clothes* 1s
(+V, +trns, +ergv) (Gen, +AGT) (Nom, +PAT)
you have taken my clothes (by mistake)
Lit. *my clothes have taken by you (by mistake)*

(5.54) ma-adop to$_3$ haw namo kia koyo?
hunted-down already QM 2pl *fox*
[+V +trns +ergv] [+Adv +sptl +prft] [Gen +AGT] [Nom +PAT]
have you hunted down the fox?
Lit. *has the fox already hunted down by you?*

(5.55) ma-asik to$_3$ nomako ko karimocoq no lomaq
swept already 1s *corners* *house*
[+V +trns +ergv] [+Adv +sptl +prft] [Gen +AGT] [Nom +PAT]
I've swept every corner of the house
Lit. *the corners of the house already swept by me*

(5.56) ma-angang to$_3$ haw nomiso cira?
called already QM 2s 3s
[+V +trns +ergv] [+Adv +sptl +prft] [Gen +AGT] [Nom +PAT]
have you called him already?
Lit. *has he already called by you?*

(5.57) ma-oay to$_3$ noniam kia ni-osaw-an a oa-oay-an
gathered-rattan already lexcl *reserved-place* *rattan-area*
[+V +trns +ergv] [+Adv +sptl +prft] [Gen +AGT] [Nom +PAT]
we have gathered all the rattan (there is) in the rattan reservation
Lit. *the reserved rattan area has already gathered/exhausted by us*

These ergative verbs can be interpreted as the "passive voice" of corresponding transitive verbs or intransitive verbs with implied objects, marked by mi-. With an ergative verb the Patient subject has a definite reading. In the following, the verbs from examples 5.53-5.57 are listed with their related mi- forms in class IIIa or class I. This derivational relation will be accounted for in Chapter 6 (section 6.3.2.3).

Class IIIb		Class IIIa or Class I	
ma-ala	*taken (by mistake)*	mi-ala	*take*
ma-adop	*hunted-down*	mi-adop	*hunt*
ma-saik	*swept*	mi-asik	*sweep*
ma-angang	*called*	mi-angang	*call*
ma-oay	*gathered-rattan*	mi-oay	*gather-rattan*

Syntactically similar to the ma- ergatives but much rarer in class IIIb is a group of verbs characterised by the derivational suffix -en (see examples 3.44 and 3.45). A few more sentence examples are given below:

(5.58) taes-en nira kia wawa
hit 3s *child*
[+V, +trns, +ergv] [Gen, +AGT] [Nom, +PAT]
he hit the child
Lit. *the child hit by him*

(5.59) cebar-an nomako ko sikal a [ma-botiq]
spread-out 1s *mat* *sleep*
[+V, +trns, +ergv] [Gen, +AGT] [Nom, +PAT] [+V, -fint]
I spread out the mat to sleep
Lit. *the mat spread/rolled out by me to sleep*

It is difficult, if not impossible, to predict whether the "passive" form of a mi- transitive verb is marked by ma- or -en. Examples 3.43 and 3.45, taken from Starosta's fieldnotes and listed again below, support our analysis that "passive" affixes, in Amis at least, are derivational and not inflectional. Since the meaning of the two ergative forms, ma-melaw *see* and melaw-en *watch, care-for* are not predictable from morphological shape nor by syntactic distribution, they have to be derived.

(3.43) ma-melaw nomako kiso i na-sani (M171)
see 1s 2s *a-while-ago*
[+V, +trns, +ergv] [Gen, +AGT] [Nom, +PAT] [Lcv, +TIM, +past]
I just saw you a while ago
Lit. *you just saw by me a while ago*

(3.45) melaw-en no wawa ko tomay (M126)
watch, take-care-of *child* *bear*
[+V, +trns, +ergv] [Gen, +AGT] [Nom, +PAT]
the child took care of the bear
Lit. *the bear took care of by the child*

Within class IIIb is a subclass of ma- verbs that imply motion or locomotion even though no LOC is required in the case frame. The characteristic prefix of this subclass of situationally motion verbs is ma-, and the notional locus is expressed as the Nominative Patient. Examples are:

(5.60) ma-dakaw nia wawa ko rangad
climb-over *child* *fence*
[+V, +trns, +ergv, +motn] [Gen, +AGT] [Nom, +PAT]
the child climbed (over) the fence
Lit. *the fence climbed (over) by the child*

(5.61) ma-dangoy nira ko ciris
swim-across 3s *river*
[+V, +trns, +ergv, +motn] [Gen, +AGT] [Nom, +PAT]
he swam (across) the river
Lit. *the river swam (across) by him*

The additional semantic feature [+motn] (motion) does not have any immediate syntactic consequence which would differentiate this class from other ergative transitive verbs. It is added to identify this subclass of verbs and to provide more information for subsequent semantic interpretation. More examples can be found in section 3.4.3.1.

Here again the traditional notion of transitivity is challenged. In the previous section we have just seen that Amis intransitive verbs with Locative Locus actually have notional objects that are more specific than the objects of their transitive counterparts, manifested as Accusative Patient. The Amis ergative transitive motion verbs do not sound very "transitive" with their English translations either, but they are consistently transitive where formal criteria, i.e., case frame and morphological features are concerned, and that is the primary consideration.

Not included in class IIIb are members of class IIId which are ergative transitive verbs with Genitive Instrument instead of Genitive Agent. These verbs indicate action or state immediately effected by natural forces such as lightning, wind, storms, and earthquakes, as examples 3.59 and 3.60 from section 3.3.2.2 will show:

(3.59) ma-asek no betili cira
strike *lightning* 3s
[+V, +trns, +ergv] [Gen, +INS] [Nom, +PAT]
he was struck by lightning
Lit. *he struck by lightning*

(3.60) ma-nanoang ko kilang no bali (M147)
move, wave *tree* *wind*
[+V, +trns] [Nom, +PAT] [Gen, +INS]
the tree is moving in the wind
Lit. *the tree is moving by the wind*

Class IIId can be characterised by SR-8 (5.52) in the previous subsection. Please refer also to the feature tree in Figure 5.4 there.

The Genitive Instrument of class IIId ergative transitive verbs is not restricted to natural forces, as the following sentence examples will show:

(5.62) ma-apa kako no bangcal nira
dumbfound 1s *beauty* 3s
[+V, +trns, +ergv] [Nom, +PAT] [Gen, +INS]
I am dumbfounded by her beauty

(5.63) ma-cocaq kako no anaboq
irritated (in the eye) ls *dust*
[+V, +trns, +ergv] [Nom, +PAT] [Gen, +INS]
my eyes are irritated by the dust
Lit. *I irritated (in the eye) by the dust*

(5.64) ma-palawad ko balocoq nomako nina radiw
moved *heart* ls *this* *song*
[+V, +trns, +ergv] [Nom, +PAT] [Gen, +INS]
my heart is moved/touched by this song
Lit. *my heart moved/touched by this song*

(5.65) ma-canar kako no selaq ni ama ako
disturbed ls *snoring* *father* ls
[+V, +trns, +ergv] [Nom, +PAT] [Gen, +INS]
I was disturbed by my father's snoring

Nor does the instrument have to be inanimate [-anmt]. The following two examples show ergative verbs with animate [+anmt] Genitive Instruments:

(5.66) ma-cekok kako nomiso
startled ls 2s
[+V, +trns, +ergv] [Nom, +PAT] [Gen, +INS]
you startled me!
Lit. *I startled by you*

(5.67) ma-rahteng toay nomako kina demak
recalled *already* ls *this* *incident*
[+V, +trns, +ergv] [+Adv, +sptl, +prft] [Gen, +INS] [Nom, +PAT]
I've recalled this incident
Lit. *this incident has already recalled by me*

One may argue that if we change our analysis of 5.62-5.67 as well as 3.59-3.60 to have a Genitive Agent instead of a Genitive Instrument, the verbs would still be transitive and ergative. If we did that, verbs in these examples would belong to class IIIb and the instrumental category, i.e. class IIId, would not be necessary. Along the same vein, a similar argument can be advanced in favour of grouping class IIIc with IIIa. In view of our understanding that both AGT and INS can be either animate or inanimate, this interchange seems plausible especially when only one of these two CR's is present. In the absence of valid syntactic distinction for these two types of constructions, we find ourselves in danger of assigning case relations by situational criteria.

Starosta (1982d:23-25) recognises the existence of an inner-outer distinction between Agent and Instrument. Instead of relying on external situational considerations such as animacy or volition, Starosta proposed to distinguish

the two case relations in terms of their relation to the obligatory Patient: the Instrument would be assigned to the external influence which was viewed as more immediately impinging on the Patient (cf. section 3.3.1), and the Agent would be the actant referring to the entity viewed as the ultimate force of the action as a whole (cf. section 3.2.1). The ambiguous analyses of class IIIa and IIIc verbs, and of class IIIb and IIId verbs is an unfortunate result of this approach. This ambiguity can be resolved only when both an Agent and an Instrument are present in the same case frame. In other words, we would have to refer to class IV transitive instrumental verbs to resolve this problem with class III simple transitive verbs.

First, let us consider Starosta's English example which has to be given ambiguous analyses:

(5.68a) The storm destroyed the tree house.
AGT PAT

(5.68b) The storm destroyed the tree house.
INS PAT

corresponding to two possible perspectives, according to which the storm is viewed as either the ultimate (AGT) or the immediate (INS) effector of the destruction. This ambiguity would be resolved if both an Agent and an Instrument were present, since Agent would outrank Instrument in Fillmore's Subject Choice Hierarchy:

(5.68c) The storm destroyed the tree house with a powerful
AGT PAT

gust of wind.
INS

For the time being, I am leaving the ambiguity involving class III verbs unresolved. We shall return to this problem in section 5.2.4 when we come to class IV transitive instrumental verbs.

In summary, class IIId, as shown by the examples, consists of psychological verbs as well as natural force action verbs. The characteristic case frame for class IIId verbs is [+[+PAT],-[+AGT],-[+LOC],+[+INS],+ergv].

5.2.4 Transitive Instrumental [+[+PAT],+[+AGT],+[+INS]]

The characteristic case frame of transitive instrumental verbs of class IV is [+[+PAT],+[+AGT],+[+INS]]. Since the case frame of Amis verbs gets saturated with only three case relations, class IV verbs can never add on another inner CR, say, [+LOC], in their case frame. This limits the derivational potential of this class of verbs, ruling out the addition of a CR. Thus the contextual feature [-[+LOC]] can be redundantly added. Should a notional location need to be explicitly expressed with a class IV transitive verb, a syntactic complementation device would be used.

As has already been discussed in section 3.3.2.3 under Accusative Instrument, when the INS actant of class IV transitive verbs is realised in the accusative case form, it is to be interpreted as an "intermediate" cause or means of action indicated by the verb. This class of verbs allows the explicit mentioning of the means by which an action is accomplished.

5.2.4.1 Accusative Transitive Instrumental

Cross-classifying class IV with the feature [±ergv] (ergative) gives us, as Figure 5.2 shows, subclasses IVa and IVb, the former being accusative and the latter, ergative.

Unfortunately, where accusative transitive instrumental verbs are concerned, there is a gap in my data. Corresponding to a class IVb ergative verb pinaro-i *fill* (see example 5.72 in the next section) is the accusative case form mi-pinaro *fill* given in examples 5.69 and 5.70 below. In both instances it is used as a non-finite verb.

(5.69) tomes-en noniam a [mi-pinaro] kina karireng to rarami
filled-up lexcl *fill* *this cart* *straw*
[+V, +trns, +ergv] [Gen, +AGT] [+V, -fint] [Nom, +PAT] [Acc, +INS]
we filled the cart up (full) with straw
Lit. *the cart filled up (full) by me with straw*

(5.70) tomes-en nomako a [mi-pinaro] to simal kina si-natoik
filled-up 1s *fill* *oil* *this bottle*
[+V, +trns, +ergv] [Gen, +AGT] [+V, -fint] [Acc, +INS] [Nom, +PAT]
I filled the bottle up (full) with oil
Lit. *the bottle filled up (full) with oil by me*

There is no way to ascertain the complete case frame of the non-finite mi-pinaro except indirectly through that of a related form ni-pinaro in the following example:

(5.71) tomes-en nomako [ko ni-pinaro tina si-natoik to simal]
filled-up 1s *filling* *this bottle* *oil*
[+V, +trns, +ergv] [Gen, +AGT] [Nom, +PAT] [Acc, +PAT] [Acc, +INS]
I filled this bottle with oil
Lit. *the filling of this bottle with oil (is) filled up (full) by me*

In example 5.71, the derived noun ni-pinaro *filling* has its source in an accusative transitive verb and carries with it the original case frame minus the Nominative AGT actant which is co-referential with the AGT of the higher verb tomes-en. Though thus shown to be a plausible candidate for class IVa, mi-pinaro *fill* will not be included in the inventory of class IVa until our data gap is filled with more direct evidence.

From section 3.3.2.1 of Nominative Instrument, we have one more candidate, sa-pi-angang *used-for-calling-someone*, for class IVa. This verb from example 3.56 has the characteristic case frame of class IV and it has a genitive agent to partially meet the definition of ergativity. The co-occurring PAT, however, is realised in the accusative case form. For ease of reference and clarity of presentation, I am repeating example 3.56 here.

(3.56) sa-pi-angang nomako kina piqio to tamdaw
used-for-calling ls *this* *whistle* *people*
[+V, +trns, ?ergv] [Gen, +AGT] [Nom, +INS] [Acc, +PAT]
I use this whistle to call people
Lit. *this whistle (is) used by me to call people*

Since sa-pi-angang violates the Fillmorean subject choice hierarchy for accusative verbs, I have decided to exclude it from class IVa, and classify it as a true instrumental focus construction (see section 3.3.2.1).

It has been pointed out in section 3.3.2.1 that sa-pi-angang is presumably derived from a transitive verb pi-angang *call (someone)* which should also have AGT, PAT, and INS in its case frame. In other words, the existence of sa-pi-angang implies the existence of its source, an accusative transitive instrumental verb belonging to class IVa. Regretably, we encounter a data gap again.

Unless we accept sa-pi-angang *used-for-calling-someone* or mi-pinaro *fill* as a member of class IVa, we would have to, for the time being, leave class IVa as an empty set. By all indications, however, this accusative subclass of transitive instrumental verbs does exist and we should at least establish this category for possible future use.

5.2.4.2 Ergative Transitive Instrumental

In this category we have ergative transitive verbs with accusative instrument that is to be interpreted as an "intermediate" cause or means of an action. We also have in this subclass verbs with genitive instrument as well as genitive agent. This difference in CF-CR association for the INS case relation can further subcategorise class IVb ergative transitive verbs.

The stem pinaro *fill* seen in section 5.2.4.1 can also take on an ergative form. Though I do not have a pinaro-en in my data, I do have the ergative imperative form pinaro-i in the following example:

(5.72) pinaro-i to bingkos kina koakoq nomiso
fill *shredded-tobacco* *this* *pipe* 2s
[+V, +trns, +ergv, +mprt] [Acc, +INS] [Nom, +PAT]
fill your pipe with some tobacco!

A genitive agent is understood with this imperative verb, so pinaro-i has the characteristic case frame of class IVb ergative transitive instrumental verbs.

Another example of class IVb verbs is tomes-en *filled up* given in examples 5.69-5.70 with the verbal complement mi-pinaro. In example 5.73 below we will show tomes-en with the same case frame but without a verbal complement.

(5.73) a [tomes-en noniam kina koiti to raraq]
will *filled-up* lexcl *this* *sack* *bean*
(+V, +fint, +futr) (+V, +fint) (Gen, +AGT) (Nom, +PAT) (Acc, +INS)
we are going to fill up this sack with beans
Lit. *this sack is going to be filled up with beans by us*

The main verb tomes-en in example 5.71, though sharing an identical form with tomes-en from example 5.73, does not belong to class IVb. Its case frame is different from that of a class IV verb and its Patient subject is a derived noun.

Example 3.61 from section 3.3.2.2 shows a genitive instrument co-occurring with a genitive agent in the same sentence. This decisively establishes AGT and INS as two distinct case relations even though in examples 5.62-5.67 and 3.59-3.60, the analyses can be ambiguous. The genitive instrument lakaw *stick* in example 3.61 which is repeated below, does not indicate natural forces, as do the INS actants in examples 3.59-3.60. Nor does it indicate an "intermediate" cause or means, as do the INS actants in examples 5.69-5.73 above. It designates the "immediate" effective cause acting on the PAT.

(3.61) ma-bahbah kia waco no lakaw nia tamdaw
drive-away *dog* *stick* *man*
(+V, +trns) (Nom, +PAT) (Gen, +INS) (Gen, +AGT)
the man drove the dog away with a stick
Lit. *the dog drove away by the man with a stick*

The following example is problematic. Since the verb has a ma- prefix, one would expect its INS to be realised in the Genitive case form. Instead, the INS actant of ma-alod *throw-at* is realised in the accusative case form, a form typical of the -en verbs.

(5.74) ma-alod kako nira to bekeloq
throw-at 1s 3s *stone*
(+V, +trns, +ergv) (Nom, +PAT) (Gen, +AGT) (Acc, +INS)
he threw at me (and hit me) with a stone
Lit. *I hit by him throwing with a stone*

The ma- verb in example 5.74 and that in example 3.61 above differ only in the CF realisation of the INS actant. Since there is no difference in morphological shape or case frame features otherwise, we are hard-put to come up with an explanation. The answer perhaps lies in a difference in semantic interpretation. It is inherent in the verb ma-alod *throw-at* to have a trajectory along which an "intermediate" cause, in this case, bekeloq *stone* exerts its influence. With ma-bahbah *drive-away*, the instrument lakaw *stick* never leaves the hand of the agent to travel a trajectory. It is always the immediate cause and is therefore realised as a Genitive Instrument.

As to why alod *throw-at* takes on a ma- prefix instead of the expected -en suffix as in tomes-en *fill-up*, it is perhaps another historical accident. As we have shown earlier in section 5.2.3.2, the root melaw *see* can derive into ma-melaw *see* as well as melaw-en *watch*. In this section we have also seen that, in our data, alod *throw-at* is matched only with ma-, tomes *fill-up* only

with -en, and pinaro *fill* with neither ma- nor -en. This is too frequent to be dismissed as data gaps, but we do need more systematic elicitation before we can know for sure which stems go with ma- and which with -en, and why.

I have also been unable to add an AGT to the case frame of class IIIc or class IIId instrumental verbs as Starosta was able to do with his English example 5.68c. The distinction between class IIIa and IIIc, between class IIIb and IIId, and between AGT and INS for the analyses of sentences 5.62-5.67 and sentences 3.61-3.62 may therefore be justified only on situational grounds, depending on the perspective in relation to the Patient actant. Though this is undesirable in lexicase practice, we have adopted the present analysis because (1) the distinction between AGT and INS has already been established on the basis of evidence like examples 3.61 and 5.74, and (2) we would have to somehow seek semantic explanation if we are to eventually distinguish the natural force verbs and the psychological verbs. In my opinion, to utilise an existing distinction and its definition in the metatheory is a superior way for making even semantic characterisations.

5.2.5 Transitive Locative [+[+PAT],+[+AGT],+[+LOC]]

Class V verbs have the characteristic case frame [+[+PAT],+[+AGT],+[+LOC]]. With already three CR's in their case frame, class V verbs can never take on an additional CR. That is to say, even though these verbs are agentive verbs which would thus be expected to have a potentially co-occurring [+INS], they cannot add this CR to their case frame. The notion of instrument, if it needs to be simultaneously expressed, would most likely take the form of a verb in a complementation structure. Hence the contextual feature [-[+INS]] can be redundantly added to the case frame of these verbs.

This class includes the transportation verbs and information verbs. Transportation verbs involve the transportation of certain objects from one location to another. In a strict sense, information words are the special class of transportation verbs which involve the transportation of information. Thus, formally in terms of case frame and semantically in terms of intrinsic meaning, transportation verbs and information verbs are similar. Furthermore, as examples 5.75-5.81 will show, they are similarly marked in most instances.

5.2.5.1 Accusative Transitive Locative

Cross-classifying class V verbs with the feature of ergativity should yield, as Figure 5.2 shows, an accusative subclass Va and an ergative subclass Vb.

In Amis, the distribution of accusative and ergative transitive locative verbs reflects different syntactic functions. While the accusative subclass consists of declarative forms, the ergative subclass contains imperative forms. In this section we will give examples of the declarative accusative transitive locative verbs which include transportation and information verbs.

(5.75) pa-osa anini kia babahi to ka-kaen-en itia ma-omah-ay
deliver *now* *woman* *food* *farmer*
[+V, +trns, -ergv] [+Adv] [Nom, +AGT] [Acc, +PAT] [Lcv, +LOC]
the women are bringing food to the farmers

(5.76) pa-ta-ini cira to baro saka itakoan
bring 3s *flower* *for* 1s
[+V, +trns, -ergv] [Nom, +AGT] [Acc, +PAT] [+P, Ben] [Lcv, +LOC]
he brought me some flowers
Lit. *he brought some flowers for me*

(5.77) pa-ta-ra cira to cacay a codad
send 3s *one* *book, letter*
[+V, +trns, -ergv] [Nom, +AGT] [Acc, +PAT]

i saba nira
younger-sibling 3s
[Lcv, +LOC]
he sent a letter to his younger brother

(5.78) pa-sebanaq ci kaka ako itakoan tia kongko
tell *elder-sibling* 1s 1s *story*
[+V, +trns, -ergv] [Nom, +AGT] [Lcv, +LOC] (Japanese loan) [Acc, +PAT]
my elder brother told me the story

(5.79) caay [pa-caqob cira to [ni-palita-en ako
not *answer* 3s *asking* 1s
[+V, +fint, +ngtv] [+V, -fint, +trns, -ergv] [Nom, +AGT] [Acc, +PAT]

a demak]]
question
he did not answer my question

Verbs in these examples show the characteristic prefix pa- which is typically the marker of causative verbs. Strictly speaking, the verb pa-ta-ini *bring* is literally *cause-to-be-here* while pa-sebanaq *tell* is literally *cause-to-know*. However, there are some verb forms in this class that seem to be basic and underived. Examples are palita *ask* from sentence 5.80 and pabeli *give* from sentence 5.81. Maybe historically they were also derived, but synchronically they are not further analysable into smaller meaningful units. Consider the following examples:

(5.80) mi-palita cira itakoan to [caay-kangaay
ask 3s ls *not-easy-one*
[+V, +trns, -ergv] [Nom, +AGT] [Lcv, +LOC] [Acc, +PAT]

a demak]
question
he asked me a difficult question

(5.81) pabeli kako iciraan(-an) to [cacay a codad]
give ls 3s *one* *book, letter*
[+V, +trns, -ergv] [Nom, +AGT] [Lcv, +LOC] [Acc, +PAT]
I gave one/a book to him

Note that the stem palita *ask* is further derived and marked by the prefix mi- which also marks simple accusative transitive verbs (see section 5.2.3.1) and corresponding "specific-object" intransitive verbs (see section 5.2.2).

Transportation and Information verbs are traditionally known as ditransitive verbs, characterised by a direct object and an indirect object. The so-called "indirect object" of ditransitive verbs has been reanalysed by DeGuzman (1978: 51-54) as having the Locus [+LOC] case relation instead of the Dative [+DAT] (relabelled in the study as the Correspondent [+COR]) case relation which was assigned to it in earlier lexicase grammars on the basis of Fillmorean case analysis.

Amis also shows a structural parallel between the [+LOC] actant of locative verbs and the so-called "indirect object" of ditransitive verbs which DeGuzman uses to justify her treatment of the "indirect object" as [+LOC] instead of [+DAT] (or [+COR]). The LOC actant of ditransitive verbs, like that of class II "specific-object" intransitives, is always specific in Amis.

Class Va accusative transitive verbs consist also of a group of imperative verbs which correspond to the transportation and information verbs presented above. These verbs also have the characteristic case frame [+[+PAT],+[+AGT], +[+LOC],-[+INS]] of class V verbs but their co-occurring AGT actant, if not understood, is realised in the genitive case form. Unlike their non-imperative counterparts, class Va imperative verbs have nominative LOC instead of nominative AGT. They fall together with the so-called "locus focus" verbs described in section 3.4.2.2. They are accusative verbs because they obey the Fillmorean subject choice hierarchy. These verbs are characterised by the causative prefix pa- and the imperative suffix -i. This suffix -i is probably the clitic form of the second person singular Genitive Agent iso which otherwise is never explicitly expressed with a transportation or information imperative. Consider the following examples:

(5.82) pa-todod-i henaca kako to cilaq (haw)?
pass *please* ls *salt* QM
[+V, +trns, -ergv, +mprt] [Nom, +LOC] [Acc, +PAT]
would you please pass the salt to me?

(5.83) pa-melaw-i kako tia cokcok [sa-pi-bohat
let...see, show 1s *key* *used-for-opening*
[+V, +trns, -ergv, +mprt] (Nom, +LOC) (Acc, +PAT)

iso tia panan]
2s *door*
(Gen, +AGT) (Acc, +PAT)
show me the key with which you opened the door

(5.84) pa-sebanaq-i kako tia ngangan nia tamdaw
tell, let...know 1s *name* *of* *person*
[+V, +trns, -ergv, +mprt] (Nom, +LOC) (Acc, +PAT)

[ka-kilim-en iso]
looked-for 2s
(Gen, +AGT)
tell me the name of the person whom you are looking for

As these examples show, imperative verbs do not necessarily stay within the same category of their source verbs. Though the source and the derived form show identical case frame features and are in agreement with respect to the feature of ergativity, there is in this case a change in CF-CR mapping which can be represented as follows:

Nominative AGT	>→	(Genitive AGT)
Locative LOC	>→	Nominative LOC
Accusative PAT	>→	Accusative PAT

This change of features in the extended case frame puts the -i imperative verbs in a different category from their corresponding source verbs in class IIIa or class Va. Referring to the criterion that derivation typically changes syntactic class (cf. DeGuzman 1978:133 and section 5.1), these imperative verbs are derived.

5.2.5.2 Ergative Transitive Locative

Class Vb consists mainly of indirect causative verbs. It includes the imperative forms of indirect causative verbs which can be roughly translated as "have X do Y to Z". These verbs have the characteristic case frame [+[+PAT],+[+AGT],+[+LOC],-[+INS]] of class V verbs and their co-occurring AGT actant, if not understood, is realised in the genitive case form. They show the characteristic causative prefix pa- and the -en suffix for ergative "passive" forms. Here are a few examples:

(5.85) pa-pi-ciciq-en ko ising tina poceq-an
have...operate *doctor* *this* *boil*
[+V, +trns, +ergv, +mprt] (Taiwanese loan) [Nom, +PAT] [Lcv, +LOC]
have the doctor operate on this boil

(5.86) pa-pi-angang-en ci Dihang ici Holam-an
have...call *Dihang* *Holam*
[+V, +trns, +ergv, +mprt] [Nom, +PAT] [Lcv, +LOC]
have Dihang call/summon Holam

(5.87) pa-pi-qonqon-en ci Pohay ici ama-an
have...urge *Pohay* *Father*
[+V, +trns, +ergv, +mprt] [Nom, +PAT] [Lcv, +LOC]
[kia kalamkam a [ta-lomaq]]
so-that *quick* *go-home*
[+V, +mnnr] [+V, -fint]
have Pohay go urge Father to go home quickly

The -en imperative verbs, which can be translated as "have X do Y to Z", differ from the -i imperative verbs on five counts: (1) when both groups share the characteristic prefix pa- for causative verbs, they have different suffixes. (2) Though they have the same case relations, the mapping of CR's to CF's is different for these two groups: -i imperative verbs have Nominative Locus and Accusative Patient while -en imperative verbs have Nominative Patient and Locative Locus. (3) Pursuant from the difference in subject choice, the -i imperative verbs are accusative while the -en imperatives are ergative. (4) The -i imperatives are transportation or information verbs; the -en imperatives are not. (5) The focus of -i verbs is the Locus which may be interpreted as an "indirect object", while the focus of the -en verbs is the "direct object" manifested by the PAT case relation. Historically, the -i imperatives commute with verbs with locative focus or referential focus (Starosta, Pawley, and Reid, 1982:70) while the -en imperatives commute with verbs with goal focus (ibid.:85). This agrees with observation (2) above. The following pair of examples serve to further illustrate this point:

(5.88a) pabeli-i kia wawa tia codad
give *child* *book*
[+V, +trns, -ergv, +mprt] [Nom, +LOC] [Acc, +PAT]
give the child the book

(5.88b) pabeli-en kia codad itia wawa-an
give *book* *child*
[+V, +trns, +ergv, +mprt] [Nom, +PAT] [Lcv, +LOC]
give the book to the child

While the second person AGT is understood in these causative-imperative expressions, the adding of an AGT in the first or third person to an -en imperative verbal construction would result in a non-imperative statement. The following example shows an -en verb with Genitive Agent expressed explicitly. Since the Agent is not in the second person, the verb is no longer [+mprt] (imperative).

(5.89) pa-pi-ngiciq-en ako cira tina qepah-an
let...share 1s 3s *this* *wine*
[+V, +trns, +ergv, -mprt] [Gen, +AGT] [Nom, +PAT] [Lcv, +LOC]
I let him share this (bottle of) wine

As in examples 5.85-5.87, the Locative Locus in example 5.89 indicates a specific object. Moreover, all these -en verbs have their source in the specific-object intransitive verbs of class II. We shall deal with the derivational processes relating these verb classes in Chapter 6.

5.2.6 Impersonal Intransitive [-[Nom],-[+AGT]]

Impersonal verbs are systematic exceptions to our claim that Patient is the fundamental and obligatory case relation and that all sentence constructions, verbal or non-verbal, have one and only one subject. Though class VI verbs are subjectless, they are nevertheless considered intransitive verbs because they do not have the characteristic case frame of transitive verbs, which is [+[+PAT],+[+AGT]]. Even if we are willing to redefine transitivity as simply being agentive [+[+AGT]], this class would still not qualify as transitive verbs.

Class VI impersonal intransitive verbs are phenomenal verbs that indicate meteorological phenomena. These impersonal verbs do not exhibit a single characteristic affix. Some appear in the root form; some come with the ma- prefix which is shared by some of the class I and class II intransitive verbs; some are marked by the suffix -an which is also shared by class VII impersonal verbs; and some show the prefix si-. Since this class included underived root stems as well as verbs marked by the derivational affixes ma-, -an, or si-, its defining characteristic lies not in morphological shape, but in the case frame specification [-[Nom],-[+AGT]] and the inherent semantic feature [+phen] for "phenomenal". The contextual feature [-[Nom]] implies [-[+PAT]], the non-occurrence of the PAT case relation. The feature [+phen] can be used also to characterise a related set of intransitive phenomenal verbs with the case frame [+[+PAT],-[+AGT]].

Examples of class VI verbs include:

(5.90a) orad-an i na-cila
rain *yesterday*
[+V, -[Nom], -[+PAT], -[+AGT], +phen] [Lcv, +TIM]
it rained yesterday

(5.90b) ma-orad i na-cila
rain *yesterday*
[+V, -[Nom], -[+PAT], -[+AGT], +phen] [Lcv, +TIM]
it rained yesterday

(5.91a) bali-an (to$_1$) i potal
wind-blow *outside*
[+V, -[Nom], -[+PAT], -[+AGT], +phen] [+Adv, +sptl, +inch, -prft, +drtv] [Lcv, +PLC]
the wind is blowing outside

(5.91b) ma-bali (to$_1$) i potal
wind-blow *outside*
[+V, -[Nom], -[+PAT], -[+AGT], +phen] [+Adv, +sptl, +inch, -prft, +drtv] [Lcv, +PLC]
the wind is blowing outside

(5.92a) si-lelesian aca i tepar no Tarawadaw
flood *again* *neighbourhood* *Hualien River*
[+V, -[Nom], -[+PAT], -[+AGT], +phen] [+Adv, +mnnr] [Lcv, +PLC]
it is flooding again near the Hualien River

(5.92b) lelesian aca i tepar no Tarawadaw
flood *again* *neighbourhood* *Hualien River*
[+V, -[Nom], -[+PAT], -[+AGT], +phen] [Adv, +mnnr] [Lcv, +PLC]
it is flooding again near the Hualien River

(5.93) toqman i parod
dark *kitchen*
[+V, -[Nom], -[+PAT], -[+AGT], +phen] [Lcv, +PLC]
it is dark in the kitchen

(5.94) tanglal henay
light *still*
[+V, -[Nom], -[+PAT], -[+AGT], +phen] [+Adv, +sptl, +inch, -prft]
it is still light (outside)

(5.95a) siqnaw (i) na-sangdeb
cold *last-night*
[+V, -[Nom], -[+PAT], -[+AGT], +phen] [Lcv, +TIM]
it was cold last night

(5.95b) na-sangdeb siqnaw
last-night *cold*
[+Adv, +TIM] [+V, -[Nom], -[+PAT], -[+AGT], +phen]
it was cold last night

It was mentioned earlier in section 5.2 that the presence or absence of an outer case relation in the case frame of a verb, though not essential to the subcategorisation of the verb, does provide secondary or redundant information for its characterisation. For instance, agentive verbs with more saturated case frames use the verbal complementation device for the expression of notional time and place; hence the absence of PLC and TIM in their case frames. Non-agentive verbs, including class VI impersonal verbs, can accommodate these notions with the outer case relations; hence the presence of PLC and TIM in their case frames. In all except 5.94 of the examples given above, either a PLC or a TIM case relation is present.

The co-occurring Place or Time for class VI impersonal verbs has the derivational potential of being reanalysed as a Patient CR, thus derivationally relating a subjectless verb to one with a Patient subject. Consider the following pairs of examples:

(5.96a) toqman itina lomaq
dark *this* *house*
[+V, -[Nom], -[+PAT], -[+AGT], +phen] [Lcv, +PLC]
it is dark in this house

(5.96b) toqman kina lomaq
dark *this* *house*
[+V, +[+PAT], -[+AGT], +phen] [Nom, +PAT]
this house is dark

(5.97a) siqnaw itini a remiad
cold *this* *day*
[+V, -[Nom], -[+PAT], -[+AGT], +phen] [Lcv, +TIM]
it is cold today

(5.97b) siqnaw kina remiad
cold *this* *day*
[+V, +[+PAT], -[+AGT], +phen] [Nom, +PAT]
this day is cold

In lexicase, only inner case relations that subcategorise verbs can be reinterpreted. Since PLC and TIM in these examples undergo reinterpretation via derivation, they should be regarded as inner case relations. Then, the case frame of class VI verbs would have to be modified as [-[Nom], -[+AGT], (+[+PLC]), (+[+TIM])]. While we have considered in the model the distinction between inner and outer place or location, we have not considered the inner-outer distinction for time. This is worth looking into for theoretical interests.

5.2.7 Impersonal Transitive [-[Nom], +[+AGT]]

I am reluctant to label the only co-occurring actant in the case frame of class VII verbs as a Patient even though I am knowingly violating the lexicase claim that Patient is the fundamental case relation. My reason is that, there is just no established CF-CR correspondence known as Genitive Patient in the Amis case marking system as presented in Chapter 4. To accept a Genitive Patient analysis would create even more serious problems. If, instead, we accept the Genitive Agent analysis that is adopted here, we have the advantage of capturing greater generalisation by being able to extend the notions of transitivity and ergativity to cover the set of impersonal verbs.

With a Genitive Agent analysis, class VII verbs can be considered both transitive and ergative because it is typical for transitive verbs to have a co-occurring Agent and it is typical for ergative syntax to show an actant marked in the Genitive case form. That Genitive NP is usually identified as an Agent when it co-occurs with a transitive verb. Hence we can apply the defining characteristics of transitive and ergative verbs to verb class VII even though no Patient subject is present. Another generalisation we can make is that, impersonal verbs, both transitive and intransitive, would have Patient subjects if they had subjects at all.

The characteristic affix for impersonal transitive verbs is the suffix -an as in the following examples:

(5.98) rakat-an no matoas-ay
walk *old-one*
[+V, -[Nom], -[+PAT], +[+AGT], +trns, +ergv, +dlbr] [Gen, +AGT]
the old man [deliberately] walked

(5.99) rakat-an nomako [ta-ra i ca-codad-an]
walk 1s *go* *school*
[+V, -[Nom], -[+PAT], +[+AGT], +trns, +ergv, +dlbr] [Gen, +AGT] [+V, -fint] [Lcv, +LOC]
I [deliberately] walk(ed) to school

In these examples the contextual features [-[Nom]] and [-[+PAT]] are redundantly marked. A subjectless ergative verb by definition cannot have a co-occurring PAT. Also, the contextual feature [-[+PAT],+[AGT]] and [+trns] are redundantly marked to signal the extended use of transitivity with this class of impersonal verbs. There is no need to redefine the feature [+ergv] which is equivalent to the contextual feature [-[Nom,-PAT],-[Gen,-AGT]] because the data support the original analysis.

Class VII impersonal transitive verbs such as rakat-an *walk* are associated with action verb. Understanding from our gloss, rakat-an seems to indicate deliberate action on the part of the performer. It means that, given a choice, the performer chose to walk instead of, say, taking a ride. Corresponding action verbs such as t-em-akat *walk* are non-deliberate. The intrinsic semantic feature [+dlbr] (deliberate) is therefore proposed to further characterise this class of subjectless verbs. With [+dlbr], emphasis is placed on the action itself, not on any nominal focus. A contrasting example with a [-dlbr] (non-deliberate) verb sharing the same root rakat *walk* is given below.

(5.100) r-em-akat kako [ta-ra i ca-codad-an]
walk 1s *go* *school*
[+V, +[+PAT], -[+AGT], -trns, -dlbr] [Nom, +PAT] [+V, -fint] [Lcv, +LOC]
I walk(ed) to school

Again, the contextual features [+[+PAT],-[+AGT]] and [-trns] are redundantly marked in example 5.100, this time to contrast with the previous examples.

5.3 Subcategorisation in terms of Semantic Features

In section 5.2 we have arrived at seven primary verb classes on the basis of case frame features. Cross-classifying them with the features of ergativity, we have increased the inventory to ten by splitting class III, class IV, and class V transitives into ergative and accusative subclasses. SR-6 and SR-7 take the simple non-agentives in class I and subcategorise them into class Ia (the simple intransitives), class IIIc (the accusative non-agentive transitive instrumentals), and class IIId (the ergative non-agentive transitive instrumentals). In the end we have twelve verb classes.

In this section, these twelve verb classes will be further subcategorised in terms of inherent semantic features until morphological variations within each major category are adequately accounted for. To supplement the minimal information required to keep the syntacto-morphological categories distinct, we shall also use localistic features to further analyse locative verbs.

5.3.1 Simple Intransitive Verbs

In section 5.2.1 we have seen that class Ia is a highly heterogeneous group. We have listed there sixteen different subgroups with descriptive labels and examples. Those labels are related to the intrinsic semantic features that will be presented in this section.

Intrinsic semantic features that can be used to further subcategorise simple intransitive verbs include those that distinguish between state, process, and action verbs, those that distinguish between quantity and quality, those that identify different kinds of psychological verbs, and those that characterise verbs with implied general or meteorological phenomena, instrument or accessory, product or acquisition, location or motion, existence or possession, etc. These features are chosen because, on the one hand, they represent important concepts in the semantic domain and, on the other, they have distinct morphological characteristics in Amis.

First, we can separate those verbs that indicate ambient or meteorological phenomena from the rest of class Ia with the feature [±phen] (phenomenal). The [+phen] verbs are to be interpreted as having to do with all encompassing atmospheric environment, weather or climate instead of, say, the quality or state of individual objects.

The class of [+phen] verbs is still a heterogeneous group, consisting of four subgroups. We can isolate the ambient verbs from the meteorological verbs with the feature [±mbnt] (ambient). While [+mbnt] verbs deal with the encompassing environment such as darkness or light, the [-mbnt] verbs deal with weather. In Amis, reference to climate and temperature such as humidity, heat or coolness is handled by [+mbnt] verbs. Ambient verbs appear in their root form, like some [-phen] quality verbs which we shall see below.

The [-mbnt] verbs deal with meteorological phenomena such as rain, wind, storm, and fog. These verbs do not form a morphologically homogeneous subgroup. Rather, they are variously marked by -an, ma-, and si-. A careful examination of the examples reveals the fact that, though all three forms refer to a meteorological phenomenon, each highlights a special aspect of it. First, the si- verbs highlight existence or occurrence of a particular meteorological phenomenon at a certain time or in a certain place. They can be characterised by the feature [+exst] (existence). Also belonging to the [+exst] group are the existential verbs era *there is* and awaay *there is not*. In this context, their Patient subject must refer to a meteorological phenomenon. The negative form, however, is rarely used in my data. Non-occurrence of certain meteorological events is instead expressed with caay *not* to be followed by a verbal complement, as in the following example:

(5.101) caay henay ka [si-solda] ko Nataoran
not *yet* *have-snow* *Nataoran*
$\begin{bmatrix}+V\\+fint\end{bmatrix}$ [+Adv] $\begin{bmatrix}+V\\-fint\end{bmatrix}$ $\begin{bmatrix}Nom\\+PAT\end{bmatrix}$
it never snows in Nataoran

From the gloss of my Amis examples, it is not so easy to tell the meanings of ma- and -an meteorological verbs apart. However, by referring to their usage elsewhere in the language, we find that ma- is mostly used with stative verbs while -an is found to occur with class VII subjectless deliberate action verbs. Of course, the notion of deliberate action does not apply to meteorological verbs, but this other usage of -an suggests that it is not a stative affix. Hence, we employ the feature [±sttv] (stative) to distinguish between the two groups. It is in the very nature of a meteorological phenomenon to be at once a state and a process. In takes the ma- verbs to highlight the stative aspect and the -an verbs to highlight the process aspect of it. As will be shown in Chapter 6, these two subgroups also have different derivational potential.

We can sum up the subcategorisation of class Ia verbs so far with the following subcategorisation rules:

SR-9 $\begin{bmatrix}+V\\+[+PAT]\\-[+AGT]\\-[+LOC]\\-[+INS]\end{bmatrix} \rightarrow [\pm phen]$ phen = "phenomenal"

SR-10 [+phen] → [±mbnt] mbnt = "ambient"

SR-11 [-mbnt] → [±exst] exst = "existence"

SR-12 [-exst] → [±sttv] sttv = "stative"

which can be represented by the following feature tree:

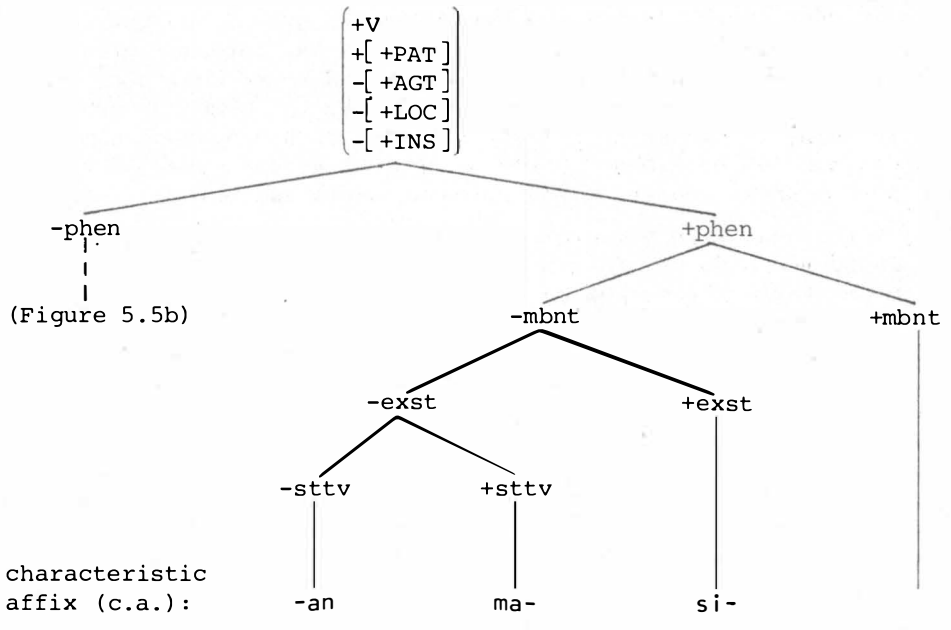


Figure 5.5a Subcategorisation of Class Ia Verbs in terms of Inherent Semantic Features; with examples

This four-way analysis is repeated in section 5.3.6 to subcategorise the subjectless phenomenal verbs of class VI.

Now we turn to the [-phen] verbs of class Ia. This group remains highly heterogeneous, even after the [+phen] verbs have split off. Verbs in this group cover many features in the semantic domain. This wide coverage is reflected in at least ten different morphological forms of affixation, namely, with ma-, -em-, ta-, masa-, mal-, mi-, misa-, si-, partial reduplication and the root form.

First we can subcategorise the [-phen] verbs into [+sttv] (stative) and [-sttv] (non-stative) verbs, which are in turn subcategorised by a number of inherent semantic features (see Figure 5.5b and 5.5c respectively).

Among the stative verbs are verbs that indicate quality, quantity, existence, or possession. Also, there are verbs that deal with psychological and other physical states. There are also the si-N verbs that are derived from nouns which can be interpreted as the implied objects of existence, possession, or quality embodiment.

We use the feature [±quan] (quantity) to isolate a subgroup of quantitative or number verbs. This subgroup in turn consists of verbs in their root form and verbs obtained through partial reduplication of the root form. The former type seems to highlight existence while the latter focuses on the descriptive quality of the numeral. We can use the feature [±exst] (existence) to keep them distinct. Then the feature [±imob] (implied object) is introduced to separate the si-N verbs from the rest of the [-quan] verbs. The si-N verbs can also be further analysed with the feature [±exst] (existence), with [+exst] verbs taking on an existential or possessive reading and [-exst] verbs taking on a descriptive reading. Non-quantitative verbs without implied objects include ma- verbs and some root forms. Both types are descriptive and both types depict physical states or qualities though the ma- verbs also depict psychological states. In want of a good semantic correlation, the ma- forms and the root forms are not further analysed here.

The subcategorisation of the [-phen] stative verbs in terms of inherent semantic features can be summarised in the following subcategorisation rules:

SR-13 $\begin{pmatrix} +V \\ +[+PAT] \\ -[+AGT] \\ -[+LOC] \\ -[+INS] \\ -phen \\ +sttv \end{pmatrix} \rightarrow [\pm quan]$ quan = "quantity"

SR-14 $[-quan] \rightarrow [\pm imob]$ imob = "implied object"

SR-15 $\begin{pmatrix} [+quan] \\ [+imob] \end{pmatrix} \rightarrow [\pm exst]$ exst = "existence"

Moreover, the ma- verbs can be further analysed into psychological and physical states with the feature [±psch] (psychological). The [+imob,+exst] si-N verbs can be further analysed into a subgroup that highlights possession and one that emphasises existence or occurrence. The former subgroup co-occurs with [+anmt] (animate) subject and the latter, place or location. This further subcategorisation can be stated in the following rules:

SR-16 $\begin{pmatrix} +sttv \\ -quan \\ -imob \end{pmatrix} \rightarrow [\pm psch]$ psch = "psychological"

SR-17 $\begin{pmatrix} +imob \\ -exst \end{pmatrix} \rightarrow [\pm pssn]$ pssn = "possession"

The last two subcategorisation rules are included even though they do not have syntactic or morphological consequences.

The following feature tree sums up the subcategorisation of class Ia non-phenomenal verbs in terms of inherent semantic features.

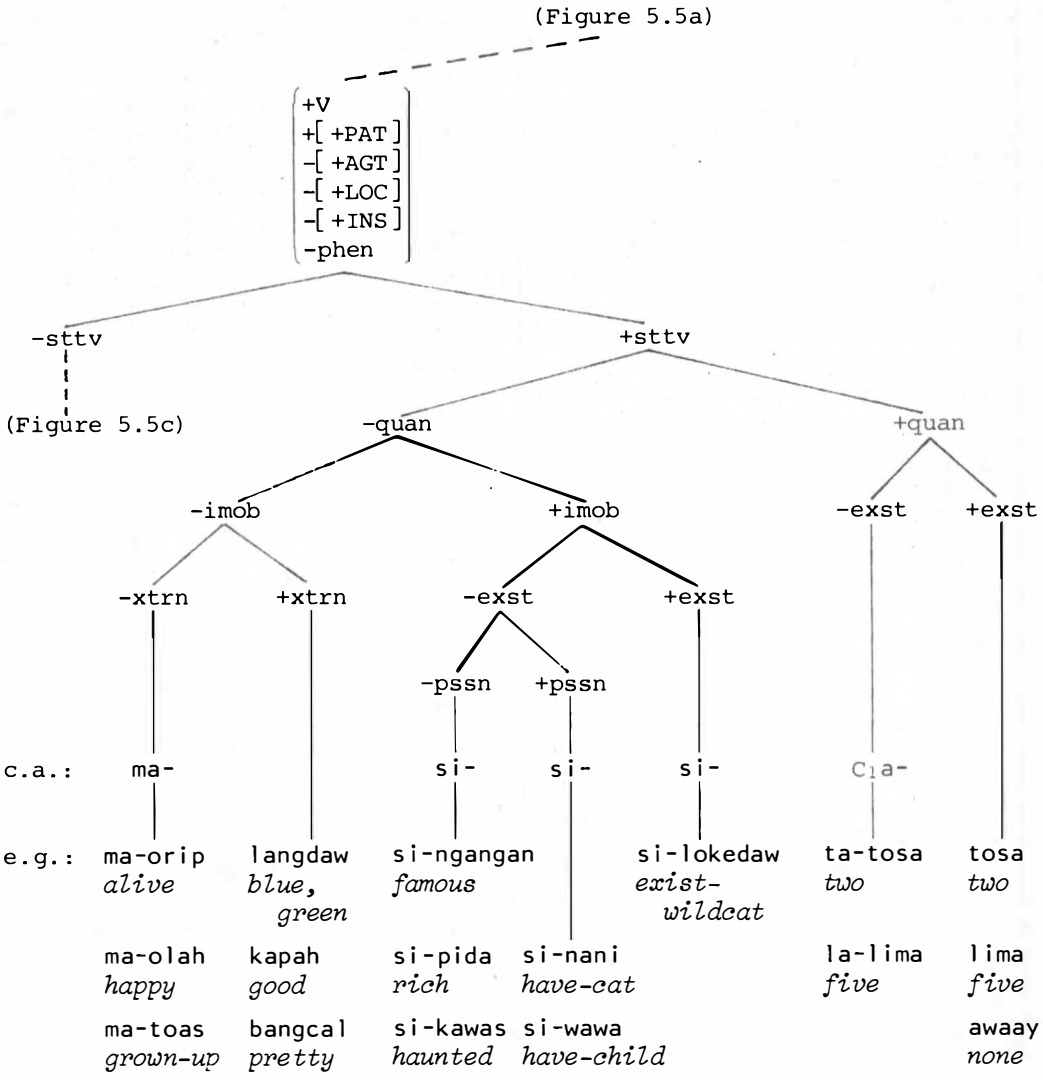


Figure 5.5b Subcategorisation of Class Ia [-phen] Verbs in terms of Inherent Semantic Features; with examples

We are considering the feature [±xtrn] (extrinsic) for distinguishing intrinsic and extrinsic qualities. For instance, possession can be considered extrinsic. While physical qualities are extrinsic, psychological qualities are intrinsic. Still the semantic distinction between the root forms and the ma- stative verbs is not very clean-cut, because ma-orip *alive* can be interpreted as a physical quality while kapah *good* can be considered evaluative and hence psychological, contrary to the feature marking given in Figure 5.5b.

Among the non-stative verbs are verbs that indicate the production, acquisition or disposal of an implied object, verbs that indicate group activity, verbs that represent movement or motion toward an implied goal, and verbs of involuntary action.

First, we use the feature [±vlnt] (voluntary) to separate the involuntary action verbs from the rest of the group. Then, the feature [±imob] (implied object) is used to break down the [+vlnt] verbs into two big categories: the [+imob] subgroup which includes verbs of production, acquisition, disposal or consumption, and association or companion; and the [-imob] subgroup which includes verbs of group participation, mutual or reciprocal action, movement, and motion with implied goal.

The [+imob] verbs show three different affixes: mal-, mi-, and misa-. The misa-N verbs are verbs that indicate creative or productive activities, with the product implied in the source N. The mi-N verbs are derived from N's that are affected by the activities. The implied objects can be acquired or consumed as a result of the activity. The mal-N verbs are derived from N's that are partners in a group activity involving two or more participants. The subject of a mal-N verb is always plural. The feature [±prdt] (product) is used to separate the misa-N verbs from the other two [+imob] subgroups. Then the feature [±afft] (affected) is used to keep distinct the mi-N verbs from the mal-N verbs. The mi-N verbs can be further subcategorised by the feature [±acqu] (acquisition) for the purpose of detailed semantic interpretation, but, morphologically speaking, this subcategorisation is inconsequential.

The [-imob] verbs have four different affixes: -em-, ta-, masa-, and mal-. Similar to the mal-N verbs in the [+imob] subgroup, the mal- verbs here also indicate group activities. When there are only two participants in an activity which involves mutual or reciprocal action, the verb is marked by masa-. If we choose not to pay attention to the number of participants and the gregarious nature of the activities, we would have the [-grup,-rcpr] verbs, where [+grup] (group) represents group participation and [+rcpr] (reciprocal) stands for reciprocal action. The [-grup,-rcpr] verbs show two different affixes: ta- and -em-. Since the ta- prefix combines with a noun stem to form a motion verb with implied goal, we can use the localistic semantic feature [±goal] to separate the ta-N verbs from the -em- verbs.

We can sum up our analysis of class Ia [-phen,-sttv] verbs with the following subcategorisation rules:

SR-18 $\begin{pmatrix} +V \\ +[+PAT] \\ -[+AGT] \\ -[+LOC] \\ -[+INS] \\ -phen \\ -sttv \end{pmatrix} \rightarrow [\pm vlnt]$ vlnt = "voluntary"

SR-19 $[+vlnt] \rightarrow [\pm imob]$ imob = "implied object"

SR-20 $\begin{pmatrix} -sttv \\ +imob \end{pmatrix} \rightarrow [\pm prdt]$ prdt = "product"

SR-21 $[-prdt] \rightarrow [\pm afft]$ afft = "affected"

SR-22 $\begin{pmatrix} +vlnt \\ -imob \end{pmatrix} \rightarrow [\pm grup]$ grup = "group"

SR-23 $[-grup] \rightarrow [\pm rcpr]$ rcpr = "reciprocal"

SR-24 $[-rcpr] \rightarrow [\pm goal]$

and two redundancy rules:

RR-6 $\begin{pmatrix}-\text{prdc}\\-\text{afft}\end{pmatrix} \rightarrow [+\text{grup}]$

$[+\text{goal}] \rightarrow \begin{pmatrix}+\text{motn}\\+\text{drcn}\end{pmatrix}$ motn = "motion"
drcn = "direction

The two redundancy rules introduce redundant semantic features. In Amis, a [-prdc,-afft] verb is a group verb. And, in general, a [+goal] verb is necessarily a directional motion verb.

This analysis can also be shown as a feature tree in Figure 5.5c below, with examples for each category.

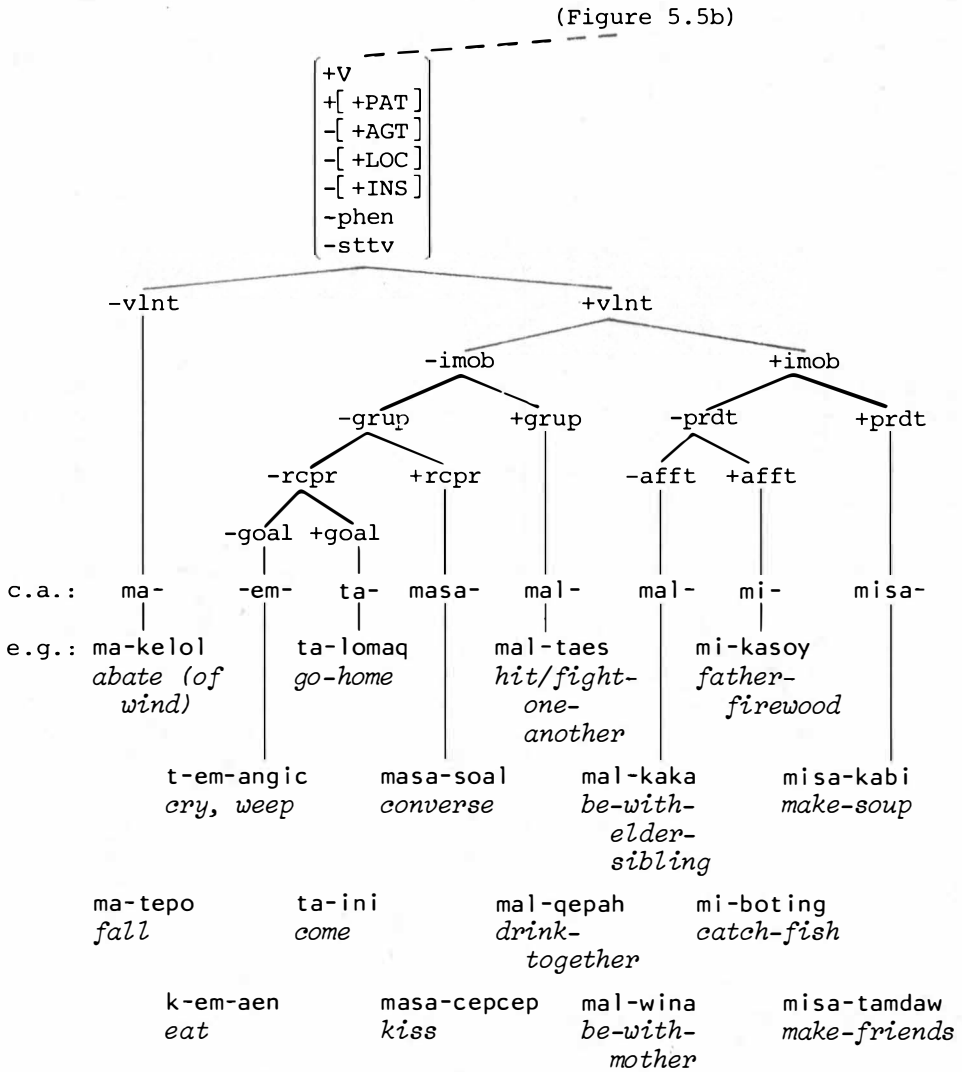


Figure 5.5c Subcategorisation of Class Ia -phen,-sttv Verbs in terms of Inherent Semantic Features; with examples

5.3.2 Intransitive Locative Verbs

In section 5.2.2 we have shown that class II is also a heterogeneous group. It included locomotion verbs such as ta-ngasa *go-up-to* in example 5.40, verbs indicating existence, location, possession, or number such as era *there is* and awaay *there is not* in examples 5.42 and 5.43, and the specific-object intransitives such as mi-alod *throw-at* in example 5.44, and ma-talaw *afraid of* in example 5.48. We can use the inherent semantic features [±lctn] (location) and [±motn] (motion) to set up a three-way distinction as follows:

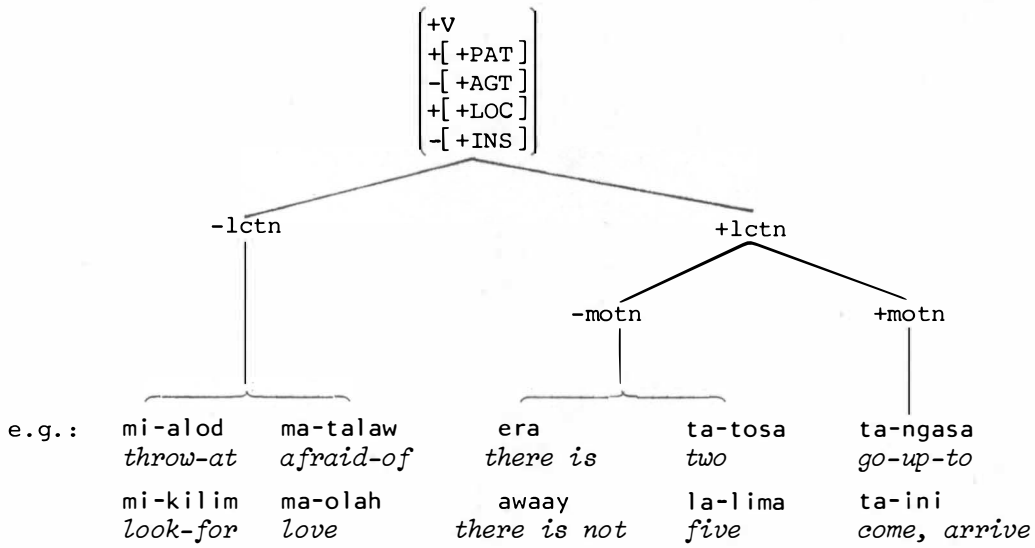


Figure 5.6a Subcategorisation of Class II Verbs by Inherent Semantic Features; with examples

The first group, namely, the specific-object intransitive verbs characterised by [-lctn] include a subgroup of action verbs marked by mi- and a subgroup of psychological verbs marked by ma-. Using the inherent semantic feature [±psch] (psychological), we can distinguish between these two subgroups.

The second group, i.e., the [+lctn,-motn] verbs, includes era *there is* and awaay *there is not* in their existential and locative usage. The LOC actant can be either a place or a person and it delimits a universe in which the entities indicated by the PAT exist or do not exist. The following pair of examples show era used respectively with a place and with a person:

(5.102a) era ko adiwawa i potal
there are *children* *yard*
[+V, -trns, +lctn, -motn] [Nom, +PAT] [Lcv, +LOC]
there are some children in the yard

(5.102b) era ko adiwawa itakoan ls

there are *children*

$\begin{bmatrix}+V\\-trns\\+lctn\\-motn\end{bmatrix}$ $\begin{bmatrix}Nom\\+PAT\end{bmatrix}$ $\begin{bmatrix}Lcv\\+LOC\end{bmatrix}$

there are some children with me

In the following pair of examples, tosa *two* and ta-tosa *two* are interpreted as verbs that indicate number as well as existence within a universe defined by LOC. These verbs are also members of class II [+lctn,-motn] verbs.

(5.103a) tosa ko ayam i dipong

two *bird* *nest*

$\begin{bmatrix}+V\\-trns\\+lctn\\-motn\end{bmatrix}$ $\begin{bmatrix}Nom\\+PAT\end{bmatrix}$ $\begin{bmatrix}Lcv\\+LOC\end{bmatrix}$

there are two birds in the nest

(5.103b) ta-tosa ko ayam i dipong

two *bird* *nest*

$\begin{bmatrix}+V\\-trns\\+lctn\\-motn\end{bmatrix}$ $\begin{bmatrix}Nom\\+PAT\end{bmatrix}$ $\begin{bmatrix}Lcv\\+LOC\end{bmatrix}$

there are two birds in the nest

Since awaay *there is none* can be interpreted as indicating the number zero and era *there are some* as indicating an unspecified number n, they can be looked upon as special number verbs. Conceptually they form a natural group which can be further characterised by the feature of existence:

RR-8 $\begin{bmatrix}+V\\-trns\\+lctn\\-motn\end{bmatrix}$ → [+exst] exst = "existence"

However, since the cardinal numbers can be reduplicated, they should be marked by a morphological feature which I shall term [+nmrl] (numeral) to set them apart from era and awaay. The first consonant of a [+nmrl] verb can be reduplicated with a vowel a inserted after it. These [+nmrl] verbs correspond to the [+nmrl] nouns described in section 3.7.2 under Increment.

The third group, i.e., the [+lctn,+motn] verbs are locomotion verbs. These verbs are uniquely characterised by the prefix ta-, so there is no need to further subcategorise this group morphologically. However, these locomotion verbs can be, and will be further characterised by localistic semantic features which supplement the minimal information carried by the locative determiners. Such verbal localistic features include [±lctn] (location), [±drcn] (direction), [±goal] (goal), [±sorc] (source), and [±assn] (association). We will deal with this in section 5.3.8.

Subcategorisation of class II intransitive locative verbs in terms of intrinsic semantic features can be summarised in the following subcategorisation rules:

SR-25 $\begin{pmatrix} +V \\ +[+PAT] \\ -[+AGT] \\ +[+LOC] \\ -[+INS] \end{pmatrix} \rightarrow [\pm lctn]$

SR-26 $[+lctn] \rightarrow [\pm motn]$

SR-27 $\begin{pmatrix} +lctn \\ -motn \end{pmatrix} \rightarrow [\pm nmrl]$

SR-28 $[-lctn] \rightarrow [\pm psch]$

and represented by the following feature tree:

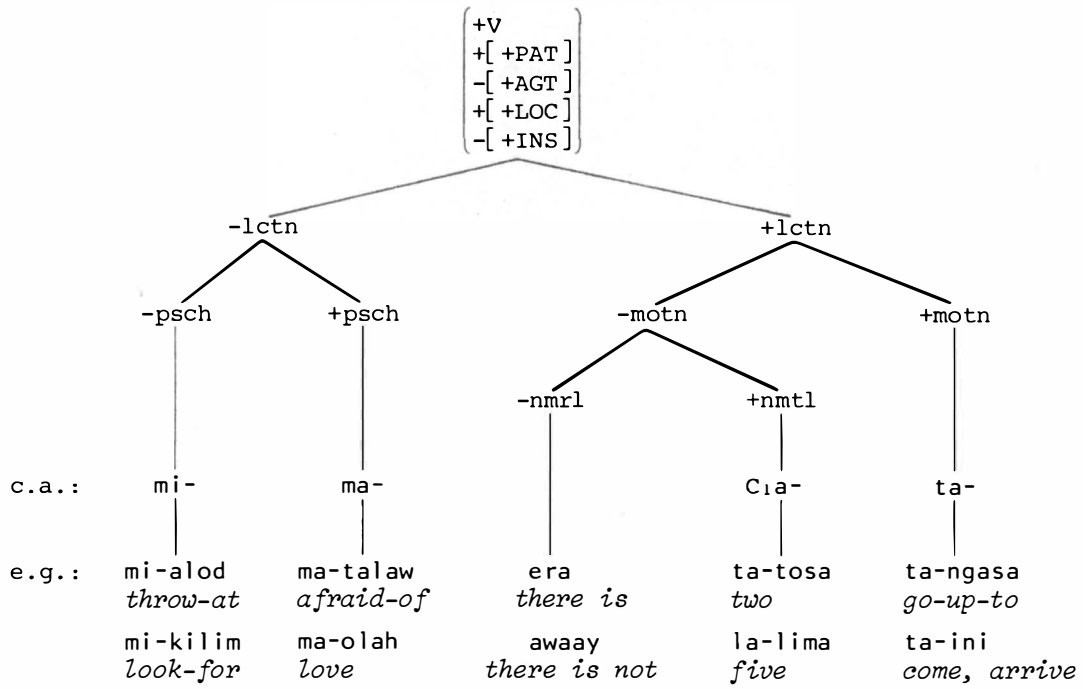


Figure 5.6b Subcategorisation of Class II Verbs by Inherent Semantic Features; with examples

Please also refer to the feature tree in Figure 5.6a above.

5.3.3 Simple Transitive Verbs

Class III verbs have already been subcategorised into class IIIa, the simple accusative transitives, and class IIIb, the simple ergative transitives, according to the feature [±ergv]. Since we allow either [+[+PAT],+[+AGT]] or [+[+PAT],+[+INS]] to satisfy the definition of transitive verbs, we can single out the instrumental transitives from class IIIa to form class IIIc, and from class IIIb to form class IIId.

In addition to syntactic consequences, especially that of subject choice, ergativity has semantic implications as well. In particular, the Patient subject of an ergative verb carries with it a definite reading, except when it is an existential verb such as era *there are some* in example 5.102a and 5.102b. The Accusative Patient of an accusative verb, on the other hand, is to be interpreted as being non-specific. Such semantic characterisations can be formulated in the following redundancy rules:

RR-9 $\begin{pmatrix}\text{Nom}\\ +\text{PAT}\end{pmatrix} \rightarrow [+\text{dfnt}] \;/[-\text{exst}]$ exst = "existence"

RR-10 $\begin{pmatrix}[+\text{prnn}]\\ [+\text{prsn}]\\ [+\text{lctn}]\end{pmatrix} \rightarrow [+\text{spfc}]$ prnn = "pronoun"; prsn = "person"; lctn = "location"; spfc = "specific"

RR-11 $[-\text{spfc}] \rightarrow \begin{pmatrix}-\text{prnn}\\ -\text{prsn}\\ -\text{lctn}\end{pmatrix}$

RR-12 $[-\text{spfc}] \rightarrow \left(-\begin{pmatrix}\text{Acc}\\ -\text{PAT}\end{pmatrix}\right)$

These rules also sum up our earlier discussions on Nominative Patient (section 3.1.2.1), Accusative Patient and non-specific objects (section 3.1.2.2 and 3.1.3.1). These rules guarantee that personal nouns and pronouns never get marked as Accusative Patient.

5.3.3.1 Simple Accusative Transitive

Both class IIIa and class IIIc belong to this group. Class IIIa has Nominative Agent while class IIIc has Nominative Instrument.

By the examples given in section 5.2.3.1, class IIIa is a homogeneous group. Its members share the characteristic prefix mi- in addition to the common case frame [+[+PAT],+[+AGT],-[+LOC],-[+INS]]. The Patient actant that is realised in the Accusative case form is to be understood as a non-specific and, in most cases, an indefinite object. Since the subgroup has already been uniquely characterised by the concurrence of case frame and morphological features, no further subcategorisation is necessary.

As for class IIIc, which is characterised by the case frame [+[+PAT],-[+AGT], -[+LOC],+[+INS]], its members are shown to be variously marked by sa-pa-, sa-pi-, and mami- in the examples given in section 3.3.2.1. The first two markings differ only by virtue of derivational sources. In other words, they boil down to the prefix sa- indicating instrument used to perform the action implied in the source verb. The difference between sa- and the prefix mami- can be accounted for by the semantic feature [±anmt] (animate). This difference can be formulated in the following subcategorisation rule:

SR-29 $\begin{bmatrix}+\text{V}\\ +[+\text{PAT}]\\ -[+\text{AGT}]\\ -[+\text{LOC}]\\ +[+\text{INS}]\\ -\text{ergv}\end{bmatrix} \rightarrow [\pm\text{anmt}]$

The subcategorisation of class IIIa and class IIIc verbs can be shown by the following feature tree:

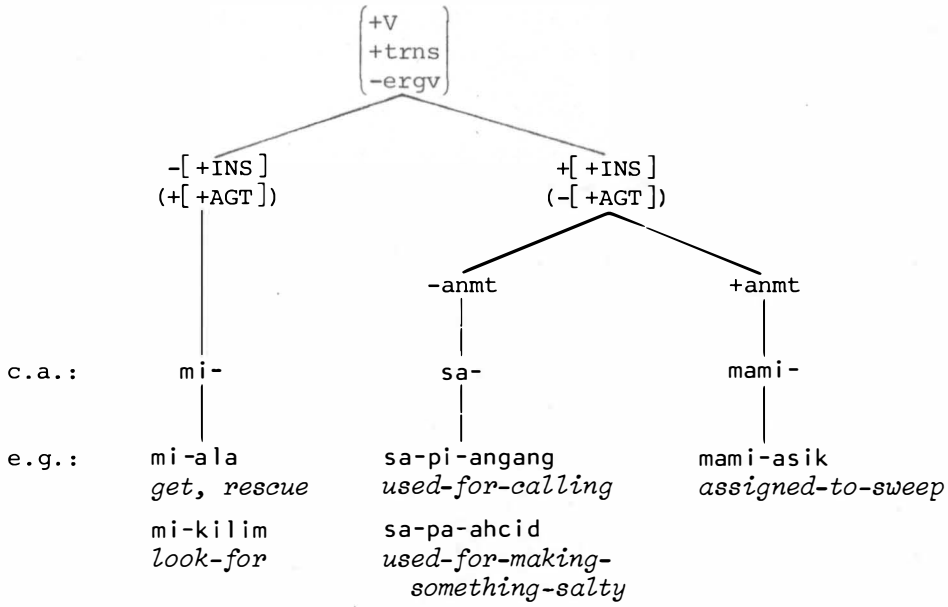


Figure 5.7 Subcategorisation of Class IIIa and IIIc Simple Accusative Transitive Verbs; with examples

5.3.3.2 Simple Ergative Transitive

Both class IIIb and class IIId belong to this group. Class IIIb has Genitive Agents while class IIId has Genitive Instruments.

Class IIIb is not morphologically homogeneous. As has been presented in section 5.2.3.2, these verbs can be marked by either ma- or -en. While some verb stems combine with both ma- and -en to form new verbs, others show only one form, with either ma- or -en but not both, in the lexicon. There is no apparent indication, whether by morphological shape or by semantic content of the stem, why it happens this way. One plausible explanation I can offer is that these are products of two competing derivational processes, say, a "passive" and an "anti-passive" derivation, if indeed both the -en forms and the ma- forms are derived.

Amis, being a split ergative language, has both ergative verbs and accusative verbs in its system. Accusative verbs have both "active" and "passive" forms. Though the passive verbs have fallen together with true ergative verbs in that they have in common Nominative Patient and Genitive Agent, the passive verbs are marked differently from the true ergatives. In Amis, passive verbs are marked by -en while true ergatives are marked by ma-. The distinction between the two groups could be formulated by the following subcategorisation rule:

SR-30 $\begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ -[+LOC] \\ -[+INS] \\ +ergv \end{bmatrix} \rightarrow [\pm pssv]$ pssv = "passive"

The feature [±pssv] (passive) is not really an inherent semantic feature because, other than an indication of the verb's derivational history, it does not add anything to our understanding of the meaning of the verb. We can say that the [+pssv] verbs are derived while the [-pssv] verbs are basic underived ergative verbs. As we do not allow the use of rule features in lexicase, the feature [±pssv] should be excluded. Then the -en verbs and the ma- verbs are indistinguishable except for their different affixes.

The ma- verbs of class IIIb consist of a subgroup of verbs with an implied object which is co-referential with the Patient subject. Examples include ma-adop *hunted-down* from example 5.54 and ma-oay *gathered-rattan* from example 5.57. As has already been pointed out in section 5.2.3.2, these ma-N ergative transitive verbs systematically correspond to the mi-N accusative transitive verbs in class IIIa. If we accept "implied object" as an inherent semantic feature of these verbs, we can set them apart from the rest of class IIIb by the following subcategorisation rule:

SR-31 $\begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ -[+LOC] \\ -[+INS] \\ +ergv \\ -pssv \end{bmatrix} \rightarrow [\pm imob]$ imob = "implied object"

The ma- verbs of class IIIb also include a subgroup of verbs that imply motion or locomotion even though no LOC is present in their case frames. Examples include ma-dakaw *climb-over* from example 5.60 and ma-dangoy *swim-across* from example 5.61. We would use the semantic feature [+motn] (motion) to set these verbs apart from the rest of class IIIb ergative transitive verbs. This can be formulated in the following subcategorisation rule:

SR-32 $\begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ -[+LOC] \\ -[+INS] \\ +ergv \\ -pssv \end{bmatrix} \rightarrow [\pm motn]$

The ma- motion verbs can be further characterised by localistic features to provide more information on the orientation and direction of the motion. We will deal with this in section 5.3.8.

Class IIId ergative transitive verbs with Genitive Instrument are marked by the characteristic prefix ma-. Since this subgroup is uniquely characterised by case frame as well as morphological feature, no further subcategorisation is necessary. It is interesting to point out that the Genitive Instrument can be a natural force, such as betili *lightning* from example 3.61, an abstract quality such as bangcal *beauty* from example 5.62, a physical object such as

anaboq *dust* from example 5.63, an action such as selaq *snoring* from example 5.65, or even a person such as nomiso "2s" in example 5.66. Except when the INS indicates a natural force, the ma- verbs have a psychological or cognitive meaning. To set the stage for subsequent semantic interpretation, the inherent semantic feature [±psch] (psychological) is used to differentiate the psychological reaction to a stimulus from a physical response to a natural force. Hence the following subcategorisation rule:

SR-33 $\begin{bmatrix} +V \\ +[\ +PAT\ ] \\ -[\ +AGT\ ] \\ -[\ +LOC\ ] \\ +[\ +INS\ ] \\ +ergv \end{bmatrix} \rightarrow [\ \pm psch\ ]$

INS indicates a natural force if the verb is marked [-psch], but if the verb is marked [+psch], it does not co-occur with a natural force INS.

Our analysis of class III simple ergative transitive verbs can be summarised in the following tree diagram:

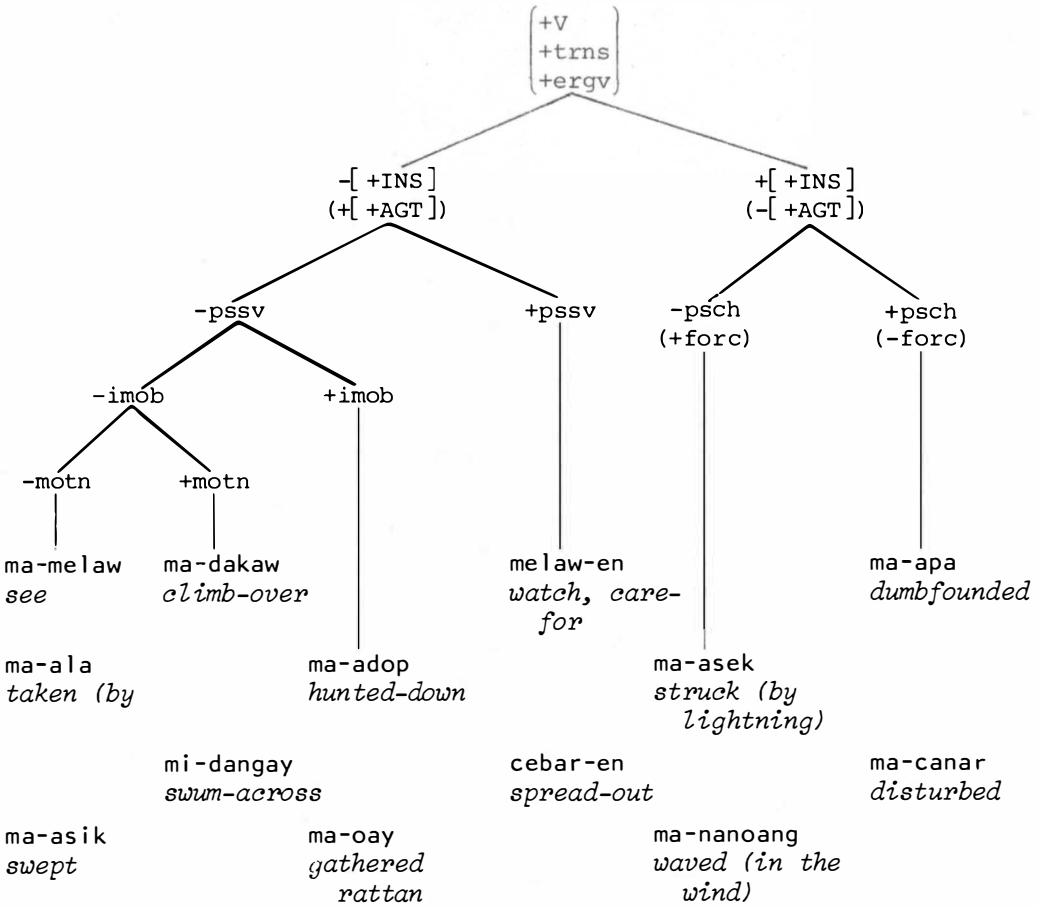


Figure 5.8 Subcategorisation of Class IIIb and IIId Simple Ergative Transitive Verbs; with examples

5.3.4 Transitive Instrumental Verbs

Class IV transitive instrumental verbs have the characteristic case frame [+[+PAT],+[+AGT],+[+INS]]. Subcategorisation of this group of verbs is not easy due to the scarcity of examples. Whatever we have shows great heterogeneity in morphological shapes. Here we try our best to assign a distinct function to each form.

As shown in section 5.2.4, class IV transitive instrumental verbs can be subcategorised into an accusative subclass, IVa, and an ergative subclass, IVb, in terms of ergativity.

5.3.4.1 Accusative Transitive Instrumental

In section 5.2.4.1 we have established class IVa as an empty set. Looking at the two candidates for class membership, namely, mi-pinaro *fill* and sa-pi-angang *used for calling*, we can nevertheless make an attempt to set up two distinct subcategories for class IVa. We know by analogy with the nominalised form ni-pinaro *filling* that a class IVa mi- verb should have a Nominative Agent, an Accusative Instrument, and an Accusative Patient (see example 5.71). The sa-pi- verb has instead a Nominative Instrument, a Genitive Agent, and an Accusative Patient (see example 3.56). Moreover, we know from the examples in section 3.3.2.1 that the prefix sa- is typical of derived inanimate instrumental usage. We can use the semantic feature [±nstr] (instrumental) to cross-classify these two verbs. The distinction between the mi- and the sa-pi- verbs can be formulated by the following subcategorisation rule:

SR-33a $$\begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ +[+INS] \\ -ergv \end{bmatrix} \rightarrow [\pm nstr]$$

It is to be noted that in this context [-nstr] implies that the referent of the INS actant is the means or "intermediate" cause rather than the instrument or "immediate" cause of the event indicated by the verb. Since the status of the two verbs in relation to class IVa is uncertain, we will not pursue the subcategorisation any further.

5.3.4.2 Ergative Transitive Instrumental

In section 5.2.4.2 we have seen examples for two subcategories of class IVb: the -en verbs co-occurring with Accusative Instrument while the ma- verbs show Genitive Instrument. Both types have Nominative Patient and Genitive Agent. Semantically speaking, the Accusative Instrument is to be interpreted as the means or "intermediate" cause of an event, as opposed to an instrument which is the "immediate" cause. We can use the feature [±nstr] (instrumental) introduced in the previous section to distinguish between the ma- and -en verbs. [-nstr] implies that the co-occurring INS is to be interpreted as the means. Perhaps an inner-outer distinction may prove to be a more general approach. For the time being, the same distinction is marked as [+nstr] and [-nstr].

We can sum up the case frame and semantic differences between the ma- and -en verbs of class IVb with the following subcategorisation rule:

SR-33b $\begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ +[+INS] \\ +ergv \end{bmatrix} \rightarrow [\pm nstr]$

which can be combined with SR-33a in the last section to make a more general statement about instruments and means:

SR-33 $\begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ +[+INS] \end{bmatrix} \rightarrow [\pm nstr]$ nstr = "instrumental"

We can sum up the cross-classification of class IVa and class IVb verbs with the feature [±nstr] in the following feature tree:

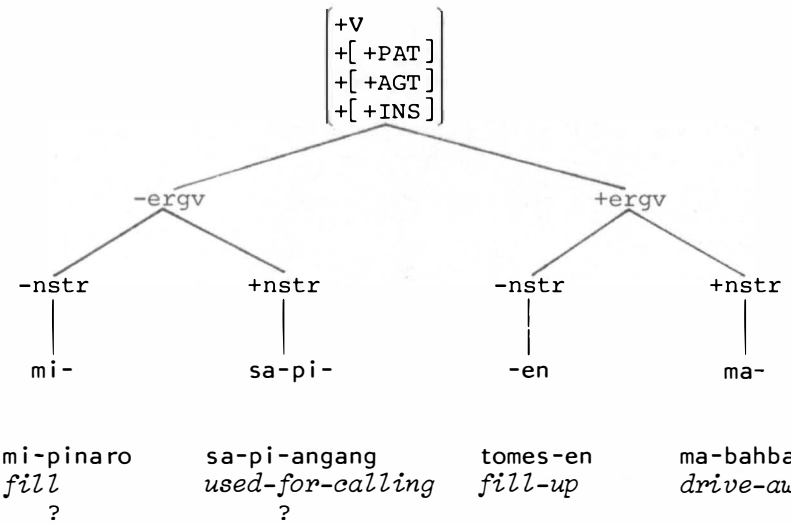


Figure 5.9 Subcategorisation of Class IV Verbs in terms of Inherent Semantic Features; with examples

5.3.5 Transitive Locative Verbs

From section 5.2.5 we have seen that class V [+[+PAT],+[+AGT],+[+LOC],-[+INS]] verbs are cross-classified with the feature of ergativity and yield an accusative and an ergative subgroup. We can apply localistic semantic features to further characterise these verbs so that more information on spatial orientation and direction can be discovered to supplement the minimal information carried by the neutral locative determiners. Localistic semantic features for locative verbs will be specially dealt with in section 5.3.8.

5.3.5.1 Accusative Transitive Locative

Class Va accusative transitive locative verbs consists only of declarative forms of transportation and information verbs. These verbs are marked by the prefix pa- in most cases, but as the examples in section 5.2.5.1 show, fossilised forms with pa- incorporated in the stem can either appear in the root form, such as pabeli *give* or with the prefix mi-, such as mi-palita *ask*.

We can subcategorise class Va with the feature [±motn] (motion). A [+motn] verb implies the moving or transportation of a physical object in space. A [-motn] verb is an information verb in this context. It implies the imparting or transmission of information from person A to person B. Class Va verbs are mostly marked by pa-, but there are also verbs that appear in their root form or with the prefix mi-. This is to be expected because a class normally contains some derived and some underived members. Some forms like palita *ask* and pabeli *give* probably were derived forms which got reanalysed as a root in the course of history. We can sum up the subcategorisation of class Va with the following rule:

SR-34

$$\begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ +[+LOC] \\ -[+INS] \\ -ergv \end{bmatrix} \rightarrow [\pm motn]$$

and the following feature tree, with examples:

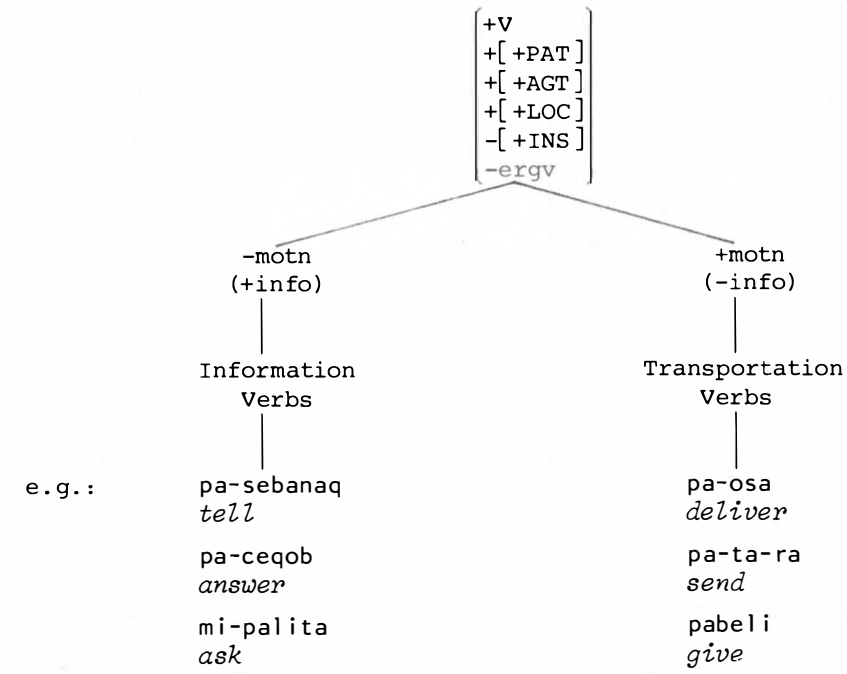


Figure 5.10 Subcategorisation of Class Va Accusative Transitive Locative Verbs; with examples

From section 5.2.5.1 we know that the imperative forms of class Va transportation and information verbs also belong to class Va. These two sets of accusative verbs have similar CR's but the imperatives are different from their declarative source in that the Agent actant is understood while an -i suffix is added to the verb stem as in the following examples:

Va DECLARATIVE	Va IMPERATIVE	
pa-sebanaq	pa-sebanaq-i	*tell*
pabeli	pabeli-i	*give*
pa-osa	pa-osa-i	*deliver*

The subcategorisation of class Va verbs with the feature [±mptv] (imperative) can be stated as follows:

SR-35a $\begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ +[+LOC] \\ -[+INS] \\ -ergv \end{bmatrix} \rightarrow [\pm mptv]$

5.3.5.2 Ergative Transitive Locative

From section 5.2.5.2 we know that class Vb ergative transitive locative verbs consist mainly of indirect causatives. Verbs in this class are uniquely characterised by the causative prefix pa- plus pi- and the -en suffix which is typical of all ergative verbs (see Figure 5.2 in section 5.2).

Like class Va verbs, class Vb verbs can also be subcategorised by the feature [±mptv] (imperative). This can be stated as follows:

SR-35b $\begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ +[+LOC] \\ -[+INS] \\ +ergv \end{bmatrix} \rightarrow [\pm mptv]$

With class Vb imperative verbs, the Agent actant is also understood. With their non-imperative counterparts, the Genitive Agent is overtly expressed. See examples 5.85-5.89 in section 5.2.5.2.

SR-35b can be combined with SR-35a in the previous section to yield a more general statement about class V locative verbs.

SR-35 $\begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ +[+LOC] \\ -[+INS] \end{bmatrix} \rightarrow [\pm mptv]$

That the Agent actant is understood for imperative verbs can be stated in the following rule:

RR-13 $[+mptv] \rightarrow [\phi[+AGT]]$

The ∅ is different from "-" because the latter would imply non-co-occurrence.

The cross-classification of Class V verbs with the features [±ergv] (ergative) and [±mptv] (imperative) results in the four-way distinction as shown in Figure 5.11 below.

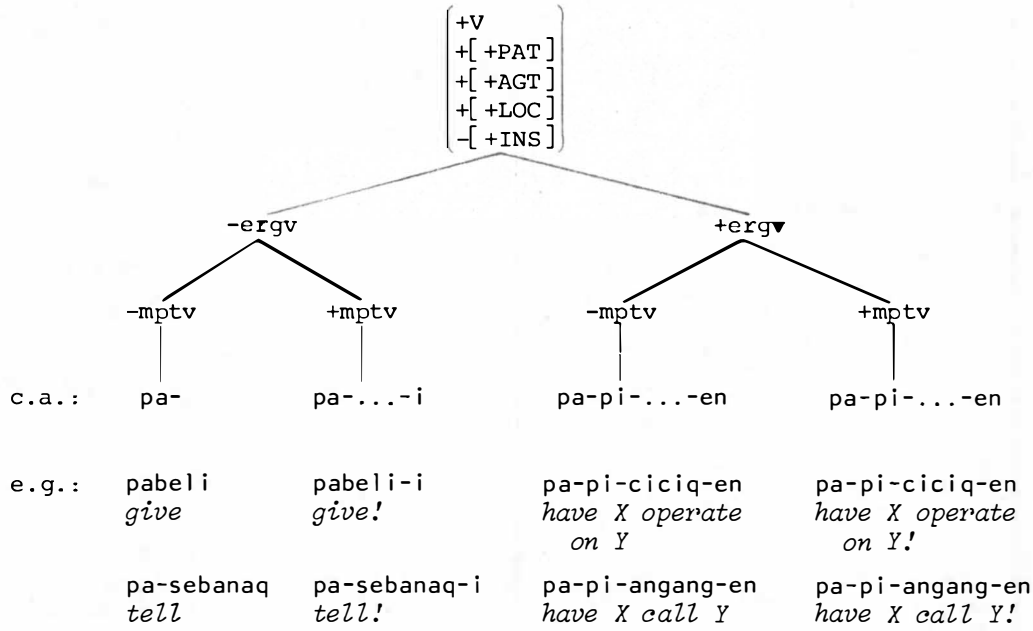


Figure 5.11 Cross-classification of Class V Transitive Locative Verbs with the Feature [±mptv]; with examples

Referring back to SR-34 in the previous section, we know that [-ergv] verbs can also be subcategorised by the feature [±motn] (motion). Together with SR-35, the two features yield four subcategories for class Va, exemplified by the four examples in Figure 5.11. We shall refer to Chapter 6 (section 6.3.2.5) for the derivation of imperative forms.

5.3.6 Impersonal Intransitive Verbs

In section 5.2.6 we have pointed out that class VI impersonal intransitive verbs are phenomenal verbs, i.e., verbs that indicate ambient or meteorological phenomena. The feature [+phen] (phenomenal) can be redundantly added to the feature specification of this class by the following redundancy rule:

RR-14 $\begin{pmatrix} +V \\ -[+PAT] \\ -[+AGT] \end{pmatrix} \rightarrow [+phen]$

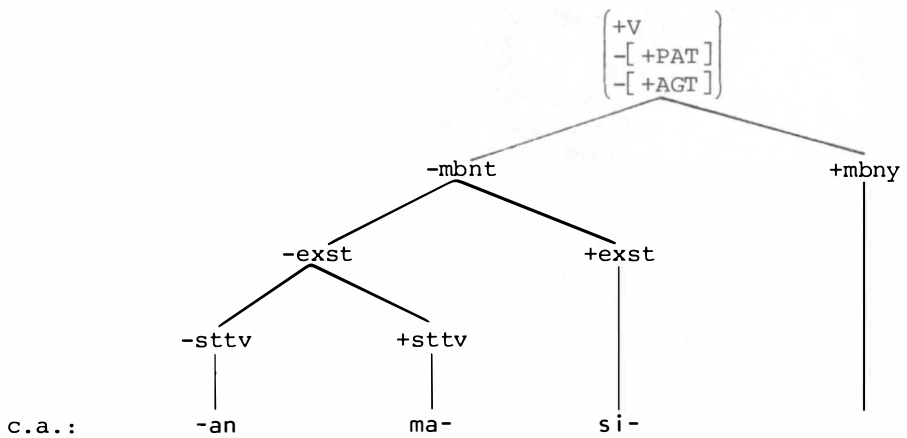
Morphologically speaking, class VI is a heterogeneous group, with its members variously marked by the ma- prefix, the -an suffix, or the si- prefix; or they may appear in the root form.

Class VI subjectless verbs have their parallels in class Ia simple intransitive verbs, where the corresponding verbs take on a Patient subject. Our analysis for the four groups of subjectless phenomenal verbs is therefore similar to that for the corresponding intransitive verbs in class Ia (see Figure 5.5a in section 5.3.1).

First of all, we can separate the affixed forms from the root forms with the feature [±mbnt] (ambient). A [+mbnt] verb has to do with the encompassing environment such as darkness or light, or atmospheric temperature of humidity. Examples include toqman *dark*, siqnaw *cold*, and soqmed *humid*. A [-mbnt] verb, on the other hand, deals with weather.

To the root orad *rain*, we can add ma-, -an, or si- and obtain three [-mbnt] verbs. A close scrutiny of the examples in class VI confirms our earlier conclusion made in section 5.3.1 that these forms are semantically distinct. A different affix means a different highlight on the meteorological event. The prefix si- indicates the occurrence of the implied meteorological phenomenon in a particular locale. It carries with it its typical existential meaning. The prefix ma- is found in class Ia and class II as an indicator of physical or psychological state and of involuntary action. With class III and class IV, ma- is the typical marker for ergative verbs. There it implies a state resulting from a "passive" action which cannot be voluntarily controlled by the Patient subject. The semantic interpretation for ma- verbs is therefore consistently involuntary and/or stative. Hence, we use the feature [±sttv] (stative) here to separate the ma- verbs from the -an verbs in class VI.

Our analysis for class VI impersonal intransitive verbs can be summed up in the following tree diagram which is the product of SR-10, SR-11 and SR-12 from section 5.3.1.



e.g.:				
	orad-an	ma-orad	si-orad	toqman
	rain	*rainy*	*have-rain*	*dark*
	betili-an	ma-kotem	si-kotem	siqnaw
	thunderstorm	*cloudy*	*have-cloud*	*cold*

Figure 5.12 Subcategorisation of Class VI Verbs in terms of Inherent Semantic Features; with examples

Some redundant semantic features can also be added to facilitate semantic interpretation. For instance, [+exst] (existence) implies a physical state of being and is therefore [+sttv] (stative) as well. [-sttv] implies action or process. In the next section, we will see that the suffix -an indicates deliberate action, but that interpretation does not apply to meteorological phenomena.

5.3.7 Impersonal Transitive Verbs

This group is unique in Amis in its case frame as well as in its morphological marking. As has been discussed in section 5.2.7, class VII verbs seem to indicate deliberate action on the part of the performer. The intrinsic semantic feature [+dlbr] (deliberate) is therefore suggested to further characterise this class of subjectless verbs. This feature can be added by the following redundancy rule:

RR-15 $\begin{pmatrix} +V \\ -[\text{Nom}] \\ +[+AGT] \end{pmatrix} \rightarrow [+dlbr]$

This feature makes it easy for us to contrast a class VII deliberate action verb such as rakat-an [*deliberately*] *walk* with a class Ia non-deliberate intransitive verb such as r-em-akat *walk* (see examples 5.99 and 5.100 in section 5.2.7).

5.3.8 Semantic Features of Locative Verbs

Locative verbs are characterised by the presence of the contextual feature [+[+LOC]] in their case frames. Hence, locative verbs include members from verb class II, the intransitive locative verbs, and from class V, the transitive locative verbs. The set of semantic features which will be used to further characterise the locative verbs are the localistic semantic features [±drcn] (direction), [±goal] (goal), [±sorc] (source), and possibly [±assn] (association). These features are similar to the localistic semantic features we have used to analyse the case forms. We use them to further characterise the locative verbs, because these verbs carry information on location and direction as their intrinsic features which supplements the minimal information carried by the neutral locative determiners.

Class II locative verbs can be cross-classified with the feature [±drcn] (direction). The directional feature, by DeGuzman's definition (1978:182), means the transportation or movement of the co-occurring PAT to or from a place designated by the co-occurring LOC. "Non-directional" would then refer to those locative verbs that do not express this type of movement. Instead, in this context non-directional verbs refer to a particular place at which the co-occurring PAT is located or stationed.

Furthermore, directional verbs can be subcategorised by the feature [±motn] (motion), with "motion" meaning the movement of the physical objects corresponding to the PAT actant. Motion verbs can be further specified as goal [+goal] or non-goal [-goal] verbs. In Amis, non-goal verbs are source verbs, to be redundantly marked [+sorc] (source). Non-motion verbs do not involve the actual movement of physical objects. They can be further

subcategorised by the semantic feature [±psch] (psychological) to yield the subcategory of psychological verbs which express feelings that are originated from a source or directed toward a goal or target, as opposed to the subcategory of specific-object intransitives that do not express psychological feelings. All locative psychological verbs are directional. They can be further characterised by the feature [±goal].

In summary, the subcategorisation of class II intransitive locative verbs by localistic semantic features can be stated by the following SR's:

SR-36 $\begin{pmatrix} +V \\ +[+PAT] \\ -[+AGT] \\ +[+LOC] \\ -[+INS] \end{pmatrix} \rightarrow [\pm drcn]$ drcn = "direction"

SR-37 $[+drcn] \rightarrow [\pm motn]$ motn = "motion"

SR-38 $\begin{pmatrix} +drcn \\ +motn \end{pmatrix} \rightarrow [\pm goal]$

SR-39 $\begin{pmatrix} +drcn \\ -motn \end{pmatrix} \rightarrow [\pm psch]$ psch = "psychological

SR-40 $[+psch] \rightarrow [\pm goal]$

The SR's can be supplemented by the following RR:

RR-16 $[\alpha goal] \quad [-\alpha sorc]$ sorc = "source"

These rules produce the following feature tree for class II verbs:

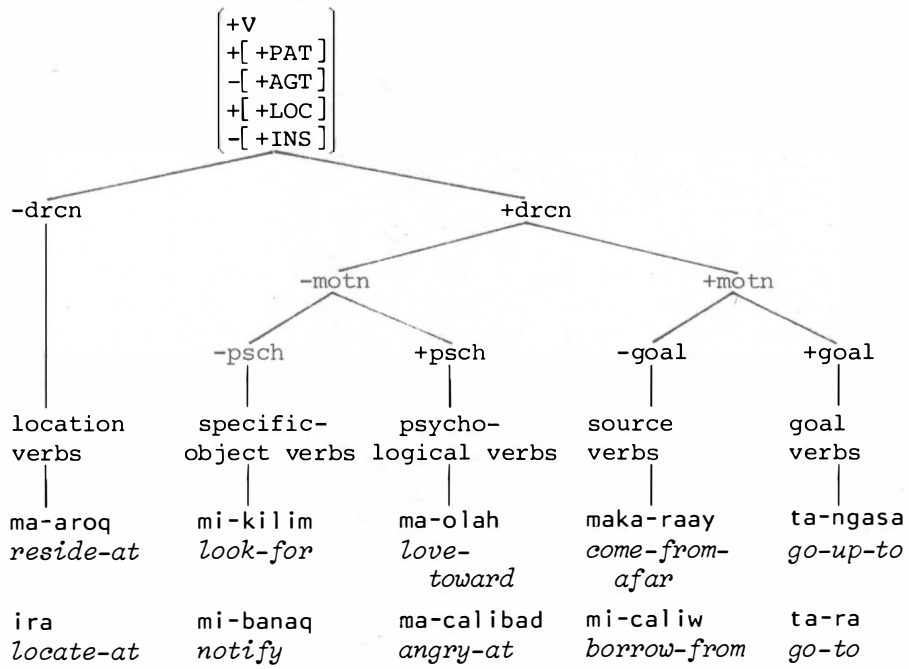


Figure 5.13 Subcategorisation of Intransitive Locative Verbs by Localistic Semantic Features; with examples

The following sentence examples illustrate the [-drcn] or location verbs of class II. With these verbs, the position of the PAT referent is stationary and not moving in space.

(5.104) ira ko nani i lomaq
locate-at *cat* *house*
[+V, -trns, -drcn] [Nom, +PAT] [Lcv, +LOC]
the cat is in the house

(5.105) awaay ko nani i lomaq
not-locate-at *cat* *house*
[+V, -trns, -drcn] [Nom, +PAT] [Lcv, +LOC]
the cat is not in the house

(3.85) t-em-ireng anini cira i tepar no salili
stand *now* 3s *side* *post*
[+V, -trns, -drcn] [+Adv, +sptl] [Nom, +APT] [Lcv, +LOC]
he is standing by the post

(5.106) mi-cangray cira i cabang
lean-against 3s *wall*
[+V, -trns, -drcn] [Nom, +PAT] [Lcv, +LOC]
he leans against the wall

(5.107) ma-aroq kako i patiamay
reside 1s *town*
[+V, -trns, -drcn] [Nom, +PAT] [Lcv, +LOC]
I live in town

Class II [+drcn] verbs are subcategorised by the feature [±motn]. With directional motion verbs, the PAT referent moves in space away from (i.e., [-goal]) or directed toward (i.e., [+goal]) the location specified by the LOC actant. Here are a few sentence examples:

(3.83) ta-ngasa cira i panan a [mi-dakaw]
go-up-to 3s *gate* *ride*
[+V, -trns, +drcn, +motn, +goal] [Nom, +PAT] [Lcv, +LOC] [+V, -fint]
he rode up to the gate

(5.108) maka-raay kako i roma no patiamay
come-from-afar ls *other* *town*
[+V, -trns, +drcn, +motn, -goal] [Nom, +PAT] [Lcv, +LOC]
I came from a town far away

Membership of class II directional motion verbs, including goal/source verbs, is rather small. The small inventory of class II motion verbs is compensated for by a fair number of class I and class III non-locative motion verbs (see section 5.3.1 and section 5.3.3) which express situationally similar notions from a different perspective. These non-locative motion verbs can indicate motion without having a LOC actant in their case frames.

With a class I non-locative motion verb, the notional goal is incorporated in the verb, as in the following examples:

ta-lomaq	*go-home*
ta-likol	*go-back*
ta-qekal	*go-out*
ta-ra-potal	*go-outside*, lit. *go-to-yard*
ta-ra-lotok	*go-to-mountain*

The derivation that gives rise to these verbs is very productive. Any noun that represents a location can combine with ta- or ta-ra- to form an intransitive non-locative motion verb. Class I non-locative motion verbs can be further characterised by the localistic semantic features [+drcn] (direction), [+motn] (motion), and [+goal] (goal). Since the last feature implies the other two, I have chosen it as a distinctive feature in section 5.3.1 (see Figure 5.5c).

Class IIIb non-locative motion verbs are marked by the feature [+motn]. They are transitive verbs. Unlike class I intransitive non-locative motion verbs, these verbs are not derived from nouns which can be interpreted as an implied orientation or direction of the motion. Class IIIb motion verbs reflect a different perspective from Class II locative motion verbs, since, with these verbs, a notional source, goal, or path is manifested as the Patient subject of the ergative transitive verb. The following examples, including the verbs from examples 5.60 and 5.61, are members of class IIIb non-locative motion verbs:

ma-dakaw	*climb-over*
ma-dangoy	*swim-across*
ma-hatebo	*jump-over*
ma-taqlib	*pass-by*

Class II directional non-motion verbs include psychological [+psch] verbs and specific-object intransitives marked as [-psch]. The directional psychological verbs can be further characterised by the feature [±goal]. An example of [+goal] verb is ma-olah *love-toward* where the LOC actant is the target toward which the emotion is directed. The LOC actant of a verb like ma-talaw *afraid-of*, on the other hand, can be looked upon as the source of fear, thus making ma-talaw a -goal verb. Since the [±goal] distinction does not have any morphological consequences here, we will not pursue the subcategorisation further. By the same token, we would not further

subcategorise the [-psch] verbs in class II. The specific-object intransitives are simply to be interpreted as being directional where localistic features are concerned.

All Class V causative verbs are transitive and directional. With these verbs, the chain of causation is syntactically expressed. In other words, the direction of influence is registered by case frame features. The AGT actant, whether overtly expressed or not, is the remote cause. The LOC actant is the notional "indirect object" of ditransitive verbs. With class Vb indirect causative verbs, the LOC actant is to be interpreted as an intermediate agent, while the PAT is the "direct object" immediately affected by the caused action. The sequence of influence proceeds from AGT to PAT through LOC. Class Vb verbs, therefore, can be redundantly marked as [+goal]. With class Va "ditransitive" transportation and information verbs, all the examples seem to indicate only the direction toward the LOC actant. These verbs, therefore, can also be redundantly marked as [+goal].

This further characterisation of class V transitive locative verbs by localistic semantic feature can be stated by the following redundancy rule:

RR-17 $\begin{pmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ +[+LOC] \\ -[+INS] \end{pmatrix} \rightarrow [+goal]$

CHAPTER 6

SYNTACTIC DERIVATION OF AMIS VERBS

6.1 Inter-Sentence Relationship

One of the main concerns of generative grammarians is the relatedness of grammatical structures. In the *Aspects* model, as well as other versions of transformational grammar including Fillmorean case grammars, relatedness is supposed to be accounted for by transformation rules.

This approach subsequently ran into many problems, among which were the problems of lexical insertion and the lack of constraints. Worse still, the transformation rules do not really reveal how the structures are related to each other. For instance, the S.D. (structural description) and S.C. (structural change) portions of a transformation rule give us little information on how the constituents of a sentence are realigned in terms of case relations and case forms. Besides, as transformation rules within the "standard theory" do not allow for a change in meaning, they do not account for any semantic shifts or change in perspective either.

In this regard, the lexicase approach is superior because (1) it has rid itself of a too powerful and hence arbitrary mechanism, i.e., the transformation rules, (2) it has built in a number of constraints on government and selection, among them the 1/Sent constraint, (3) syntactic description in the lexicase model is handled within the lexicon, and with the abandonment of PSR's, the problem of lexical insertion vanishes and co-occurrence restrictions between constituents are statable as redundancy rules with contextual features, and (4) relatedness of sentence constructions can be stated as relatedness between verbs or verb classes with respect to shared syntactic, semantic, and phonological features stated in the derivation rules (DR's), making it unnecessary to invoke transformations that ignore changes in perspective and case assignment.

According to Starosta (to appear a:1), one of the fundamental claims of the lexicase framework is what may be referred to as "Patient centrality". According to this hypothesis, the Patient case relation is obligatorily present in the case frames of all verbs. Similar claims have been made by linguists such as Anderson (1977) and Grüber (1965), though their approaches differ in significant ways from that of the lexicase model. Semantically, the Patient marks the perceptual centre of a predication, and syntactically, a number of relationships among verbal clauses can be accounted for explicitly, economically, and insightfully in terms of verbal derivation, including

zero-derivation rules involving the promotion or demotion of Patients, without resorting to ad hoc and empirically vacuous transformational rules.

By stating such rules in terms of the limited set of case relations available in a lexicase grammar (cf. Starosta 1982d), we place an automatic empirical constraint on the kinds of derivation rules which are possible: all derived verbs must fit into the set of possible verb classes as characterised by the set of possible case frames that can be constructed with these available case relations. A corollary of this process is that almost without exception, all new derived verbs will enter a class which already contains some underived members. That is, the set of basic syntactically definable verb classes remains essentially constant, and each of the basic classes contains some underived charter members and some other members derived from items in other classes.

As an example of this approach, instead of deriving a sentence such as 6.2 from 6.1 transformationally, as is commonly done in Fillmorean case grammar (Fillmore 1971:49), the verb of sentence 6.2 can be derived from the verb of 6.1 in the lexicon:

(6.1) John hit_1 his cane against the fence.
PAT LOC

(6.2) John hit_2 the fence with his cane.
PAT MNS

That is, examples 6.1 and 6.2 involve pairs of distinct though homophonous words, identical in "part of speech", root meaning, and pronunciation, but differing in syntactic subclass and perspective.

The lexical derivation process which produces hit_2 from hit_1 can be formalised as number 6.3:

(6.3) DR-1 $\begin{bmatrix} +V \\ +[+LOC] \\ \supset \begin{Bmatrix} +LOC \\ \alpha F_i \end{Bmatrix} \\ \supset \begin{bmatrix} +PAT \\ \beta F_j \end{bmatrix} \\ \gamma F_k \end{bmatrix} \rightarrow\!\!> \begin{bmatrix} +V \\ +([+MNS]) \\ \supset \begin{Bmatrix} +PAT \\ \alpha F_i \end{Bmatrix} \\ \supset \begin{bmatrix} +MNS \\ \beta F_j \end{bmatrix} \\ \gamma F_k \end{bmatrix}$

that is, corresponding to a locative verb, there may be another verb which is non-locative, whose Patient corresponds to the Locus of the underived verb, and whose optional inner Means actant corresponds to the underived Patient. In effect, the Locus has been "promoted" to Patient, becoming the perceptual centre of the sentence, and the former Patient has been "demoted" to the more peripheral Means relation.

This process of derivation then imposes a new *perspective* on the event of hitting by reinterpreting the situational goal of the action. The reassignment of a Patient case relation to the Locus case relation in the first construction obligatorily downgrades the previous Patient, which encoded the undergoer of the action, and reinterprets it for the derived verb as manifesting the Means case relation. Thus cane in sentence 6.1 is perceived as the thing being moved through space, but in sentence 6.2 it is perceived as

the means of hitting. Similarly, fence, which acted as the goal of the motion of the cane in sentence 6.1, is viewed as the entity affected by hitting in sentence 6.2.

Derivation Rules such as DR-1 formalise the tendency in natural languages for verbs of one class to be reinterpreted analogically as verbs of some other class. Every verb stem corresponds to a conceptualisation of a particular external situation, and each case frame represents a particular perspective on a situation. Thus by deriving a stem from one case frame class to another, we are putting the situation represented by the verb stem into a new perspective.

This derivational approach can be applied in a formally simple and conceptually revealing way to the description of many other inter-sentence relationships involving distinctions of case-marking and transitivity, and in fact provides the basis for a neat typology of such relationships.

In conclusion, lexicase, being a non-transformational generative lexicalist framework of grammatical description, does not account for inter-sentential relationships with transformation rules. Instead, relationships among verbal clauses are accounted for in terms of verbal derivation processes involving the promotion or demotion of the case relations to and from the Patient position which marks the perceptual centre of a predication.

In this chapter, we are going to present some syntactic derivation rules for Amis. We shall limit ourselves to those DR's that affect the case features registered in the source. That is to say, we would only consider those derivation processes that (a) incorporate a case notion, and either (b) delete a CR, (c) add a CR, or (d) reinterpret the CR's of the source V without adding to or subtracting from the total number of case roles. This part of the study is important as a sequel to a study of verbal constructions and verbal classification because, first of all, we can demonstrate the lexicase claim that inter-sentence relationships can be adequately accounted for with DR's, without the use of transformation rules. Secondly, we want to test the hypothesis of Patient centrality with Amis data. Also, a study of syntactic derivation of Amis verbs can shed some light on the development of the focus system in Amis as compared with Proto-Austronesian and Philippine-type languages.

Now a few words about the form of derivation rules (DR's) are in order even though we have already presented Derivation Rules under section 2.2.2.3 before. Both the input and the output of a DR is given in the form of a feature matrix. The input and the output is related by a fletched arrow (>→). A DR can change, add or delete syntactic, semantic or phonological features to produce new lexical entries by analogy with pre-existing ones. New features are added to the output matrix only. They can be in the form of simple feature or contextual feature, marked by either a "plus" (+) or a "minus" (-) sign. I have listed case features before semantic features for ease of reference, but this is only a matter of convenience. It is to be noted that in this chapter, specifically in DR's, case form labels are explicitly marked by + or -, to be consistent with the lexicase convention for expressing implicational relation. As for deletion, the convention is that all features in the input matrix that fail to appear in the output matrix are necessarily omitted. Other features of the input class not specifically mentioned in the input and/or output matrices are carried over into the derived class.

With derivation rules, correspondence between a set of input and output features can be indicated by using, instead of the plus or minus sign, the same Greek letter to mark the corresponding features on both sides of the arrow, such as γF_k in the input and output matrices of DR-1. This convention was first introduced in section 2.2.2.2 under Redundancy Rules. Last, but not least, for stating the correspondence between case features which accounts for the "promotion" and "demotion" of case relations, we use, in addition to the Greek letters, a "horseshoe" ($\supset$) to imply that the occurrence of one feature implies the selection of another feature. For example, the notations of $\supset[+LOC,\gamma F_i]$ and $\supset[+PAT,\gamma F_i]$ in DR-1 refer to selectional implications which signal the correspondence between the LOC in the source and the PAT in the output, with reference to the features γF_i. The "horseshoe" notation is different from the "double negation" notation, which was also first presented in section 2.4.4, in that the former refers to selectional implications a violation of which does not necessarily affect grammaticality. The "horseshoe" notation is used only with derivation rules in this dissertation.

Changes in phonological representation, if any, are expressed as a second part of the derivation rule as in example 2.13 for English gerundive nominalisation which is repeated below. The features shown in this seemingly separate part of the rule are actually part of the main input and output matrices in the first part.

(2.13) (a) $\begin{bmatrix} +V \\ \supset \begin{pmatrix} +Nom \\ \alpha F_i \end{pmatrix} \end{bmatrix} \rightarrow \begin{bmatrix} +N \\ -[+rtcl]\_\_ \\ \supset \begin{pmatrix} +Det \\ \alpha F_i \end{pmatrix} \end{bmatrix}$

(b) $] \rightarrow -i\eta]$

This separate listing of parts (a) and (b) is only a rule convention adopted to highlight the morphophonemic changes in a more traditional way. We should bear in mind that the two parts of the derivation rule are actually inseparable and should be viewed as a single DR. For zero derivations, the morphophonemic statement is unnecessary.

6.2 Verbs Derived from Nouns

It has been repeatedly pointed out in Chapter 3 and Chapter 5 that, in Amis, many case-like notions can be expressed by verbal complementation. In most cases, the higher verb is derived from a noun in which the caselike notion is embodied. For instance, an instrumental verb like si-tokar *use-ladder* has tokar *ladder* as its implied instrument; mal-kaka *be-with-elder-sibling* has kaka *elder sibling* as its implied companion; and mi-boting *catch-fish* has boting *fish* as its implied object. All these derived verbs are intransitive, with the characteristic case frame of [+[+PAT],-[+AGT],-[+LOC],-[+INS]]. They are therefore members of class Ia. Sometimes, these derived verbs can be used alone without complementation.

Verbs that are derived from nouns are of two types: (1) those which incorporate an underived N and (2) those which take a derived N (a deverbal N with original case frame of the source V) and create a new verb from it.

The first type includes the incorporation of notional patient or instrument, and is described in sections 6.2.1 to 6.2.6 below. The case role assumed by the derived V, say, the notion of instrument, will not occur again as a separate CR in the case frame of the new verb. Thus it is the derived verb that assumes the responsibility of carrying the case role expected to be carried by the source N.

The second type obtains the complex verb forms through a secondary derivation from deverbal source nouns. This second type of verbal derivation from nominal sources is described in section 6.2.7 below.

6.2.1 Verbs that Imply Phenomena

A subclass of verbs in Amis that are derived from nouns that are semantically marked as [+phen] (phenomenon) include meteorological verbs, ambient verbs, and existential verbs.

Meteorological phenonmena such as orad *rain*, bali *wind*, baliws *typhoon*, kotem *cloud*, lelesi *flood*, lelen *earthquake*, betili *thunderstorm, lightning*, and calamay *fog* are derived into verb forms by three possible processes:

(1) by adding the prefix si- to the [+phen,-mbnt] noun, thus making it an existential [+exst] verb,

(2) by adding the prefix ma- to the [+phen,-mbnt] noun, thus making it a stative [+sttv] verb, or

(3) by adding the suffix -an to the [+phen,-mbnt] noun, thus making it a process verb which is marked [-exst,-sttv] by the present analysis.

Process (1) can be expressed by the following derivation rule:

DR-2

$$\begin{bmatrix} +N \\ +phen \\ -mbnt \end{bmatrix} \quad >\!\!\rightarrow \quad \begin{bmatrix} +V \\ -[+Nom] \\ +([+PLC]) \\ +([+TIM]) \\ +phen \\ -mbnt \\ +exst \end{bmatrix} \quad \begin{array}{l} \\ \\ \\ \\ \\ mbnt = \text{"ambient"} \\ exst = \text{"existence"} \end{array}$$

$$[\quad \rightarrow \quad [si-$$

Examples include: si-kotem *cloudy* from kotem *cloud* and si-saqpiqay-a-bali *breezy* from saqpiqay-a-bali *cool-wind, breeze*. Note that sawpiqay-a-bali is a compound form, the function of a having been previously discussed in section 4.2.2 under Prepositions. This form is a compound because of its semantic unity as well as the treatment it receives by DR-2 as a single unit. That it is a compound and not a syntactic construction is further supported by the fact that a form produced in analogy to the N-a-N pattern, say, *malbawaay-a-pising *swollen face* has been rejected by DR-2 as input to the rule. Since I am not dealing with nominal derivation or compounding in this study, I am including this discussion here only to justify the characterisation of the input features in DR-2.

Process (2) can be stated as the following derivation rule with input features identical to that of DR-2:

DR-3

$$\begin{bmatrix} +N \\ +phen \\ -mbnt \end{bmatrix} \gg \begin{bmatrix} +V \\ -[+Nom] \\ +([+PLC]) \\ +([+TIM]) \\ +phen \\ -mbnt \\ +sttv \end{bmatrix} \quad sttv = \text{"stative"}$$

$$[\rightarrow [ma-$$

Examples include: ma-orad *raining* from orad *rain* and ma-bali *(wind) blowing* from bali *wind.*

Process (3) can be described by a derivation rule similar to DR-2 or DR-3 with only a difference in two semantic features:

DR-4

$$\begin{bmatrix} +N \\ +phen \\ -mbnt \end{bmatrix} \gg \begin{bmatrix} +V \\ -[+Nom] \\ +([+PLC]) \\ +([+TIM]) \\ +phen \\ -mbnt \\ -exst \\ -sttv \end{bmatrix}$$

$$] \rightarrow -an]$$

Examples include: orad-an *raining* from orad *rain*, baliws-an *having a typhoon* from baliws *typhoon*.

All three subtypes of these meteorological phenomenon verbs are subjectless, do not co-occur with a PAT, and may have a Time and/or Place actant, as in the following examples:

(6.4) si-saqpiqay-a-bali i sansandeb
cool-breezy *dusk*
$\begin{bmatrix} +V \\ +phen \\ -mbnt \end{bmatrix}$ $\begin{bmatrix} Lcv \\ +TIM \end{bmatrix}$
it is breezy at dusk

(6.5) ma-orad to$_1$ i potal
raining *already, still* *outside*
$\begin{bmatrix} +V \\ +phen \\ -mbnt \end{bmatrix}$ $\begin{bmatrix} +Adv \\ +sptl \\ +inch \\ -prft \\ +drtv \end{bmatrix}$ $\begin{bmatrix} Lcv \\ +PLC \end{bmatrix}$
it has been raining outside

There is another subset of phenomenon verbs which are obtained by a similar DR, but with no changes in morphological shape. These are the ambient [+mbnt] verbs which include: siqnaw *cold* and liqcec *snow*. The derived verbs are similar to other class I stative verbs such as arawraw *round*, coplak *sour*, adada *sick*, and lahkak *red* in not showing any additives to the basic forms. The derivation rule that derives the [+mbnt] stative verbs from nominal sources can be stated as follows:

DR-5 $\begin{pmatrix} +N \\ +phen \\ +mbnt \end{pmatrix} >\!\!\rightarrow \begin{bmatrix} +V \\ -[\,+Nom\,] \\ +([\,+PLC\,]) \\ +([\,+TIM\,]) \\ +phen \\ +mbnt \\ +sttv \end{bmatrix}$

Since this is a zero-derivation, no morphophonemic statement needs to be made.

Subjectless phenomenon verbs can further be derived into the category of simple intransitive verbs by adding a subject PAT to their case frames. Nouns that may occur as head of their subject NP are restricted to some general terms that refer to weather or time or place, as the following example will show:

(6.6) si-kotem kina remiad
cloudy this day, weather
$\begin{pmatrix} +V \\ +phen \\ -mbnt \end{pmatrix}$ $\begin{pmatrix} Nom \\ +PAT \end{pmatrix}$
it is cloudy today
Lit. *this day/weather is cloudy*

This derivation from subjectless verbs to intransitive verbs will be treated in section 6.3.2.1 below.

6.2.2 Verbs that Imply Measure

Verbs indicating physical states of being such as colour, size, shape, temperature, and weight are derivationally related to abstract quality nouns indicating these physical states. The relation can be expressed by the following rule:

DR-6 $\begin{pmatrix} +N \\ +meas \end{pmatrix} >\!\!\rightarrow \begin{bmatrix} +V \\ +[\,+PAT\,] \\ -[\,+AGT\,] \\ -phen \\ +meas \end{bmatrix}$ meas = "measure"

No morphophonemic statement is made in DR-6 because the derivationally related measure nouns and verbs share the same basic form. It is in a way arbitrary to claim that the direction is from N to V and not the other way around because the measure nouns are abstract. We may also consider the following derivation process:

DR-6a $\begin{bmatrix} +V \\ +[\,+PAT\,] \\ -[\,+AGT\,] \\ -phen \\ +meas \end{bmatrix} >\!\!\rightarrow \begin{pmatrix} +N \\ +meas \end{pmatrix}$

The following pair of examples show the related forms used as N in (a) and as V in (b):

(6.7a) ma-banah haw kiso to baqkec nia aba?
know QM 2s *weight* *box*
[+V, +trns, -ergv] [Nom, +AGT] [Acc, +PAT, +meas]
do you know the weight of the box?

(6.7b) baqkec kia aba
heavy *box*
[+V, -trns, +meas] [Nom, +PAT]
the box is heavy

Other words that belong to this category include: tarakaw *height/tall*, tataang *size/big*, and taraqyaq *length/long*.

Referring back to Figure 5.5b, we can place the derived measure verbs with the [+xtrn] (extrinsic) quality verbs, with the following redundancy rule:

RR-18 [+meas] → [+xtrn]

6.2.3 Verbs that Imply Instrument

As has been mentioned in section 3.3.3.2 under the Instrument case relation, there are two subclasses of verbs in Amis that are derived from nouns whose referents are situational instruments of the actions indicated by these verbs. As shown respectively in sections 3.3.3.2.1 and 3.3.3.2.2, the morphological shape of the derived form can either be modified by the suffix -en, making the resultant form an ergative verb, or by the prefix si-, making the resultant form a stative verb. The derivation rule for the first type can be formulated as follows:

DR-7 [+N, +nstr] >> [+V, +[+PAT], -[+AGT], -[+INS], +trns, +ergv, -sttv, +nstr]
trns = "transitive"
ergv = "ergative"
nstr = "instrument"
] → -en]

The derivation rule for the second type can be stated as follows:

DR-8 [+N, +nstr] >> [+V, +[+PAT], -[+AGT], -[+INS], -trns, +sttv, +nstr]
[→ [si-

These verbs are normally used with verbal complements which depict the activities for which the implied instruments are used. For examples see the respective sections mentioned above.

The prefix si- can also be attached to non-instrumental nouns to indicate that a certain object is in existence, in one's possession, or possesses certain intrinsic qualities. These verbs also belong to the class of simple intransitive verbs. Note that the meanings of these derived verbs are not as readily predictable as those with implied instrument (cf. Figure 5.5b in section 5.3.1). Examples include: si-pida *rich* from pida *money*, si-kawas *haunted* from kawas *ghost*, and si-ngangan *famous* from ngangan *name*. This derivation rule can be stated as follows:

DR-9 [+N] >→ [+V, +[+PAT], -[+AGT], -[+INS], -phen, +sttv]

[→ [si-

6.2.4 Verbs that Imply Product

This class of verbs implies a product or result from the action performed by the subject Patient. The verb is a "making" verb and the product is mostly a physical object though it can be something more abstract like *a dance* as in misa-kero *make a dance* and *numbers* as in misa-osi *make numbers, count*. The typical prefix to this class is misa- and the derivational relation can be stated by the following rule:

DR-10 [+N] >→ [+V, +[+PAT], -[+AGT], +prdt] prdt = "product"

[→ [misa-

The verb is intransitive because the notional patient is incorporated in the verb while the notional agent is reinterpreted as the syntactic PAT. Examples include: misa-lomaq *build* from lomaq *house*, misa-labi *make supper* from labi *evening meal*, misa-kero *dance* from kero *dance*, misa-osi *count* from osi *number*, and misa-toron *make rice-cake* from toron *rice-cake*. One example involving semantic shift is misa-tamdaw *make friends* from tamdaw *person, people*.

Referring back to Figure 5.5c, we know that [+prdt] verbs are redundantly non-phenomenon and non-stative verbs with implied object.

6.2.5 Verbs that Imply Acquisition

While the verbs in the previous section involve a creative activity that produces the object explicitly mentioned in the verb form, the verbs we shall describe in this section involve activities by which one acquires the implied object. Since it is the notional patient that is affected by the action and

is incorporated in the derived verb form, the notional agent gets reinterpreted as the syntactic PAT and the verbs are intransitive. This class is characterised by the prefix mi- (see Figure 5.5c in section 5.3.1). Examples include: mi-qadop *hunt* from qadop *game, animal*, mi-boting *catch-fish* from boting *fish*, mi-qoay *gather rattan* from qoay *rattan*, and mi-kasoy *gather-firewood* from kasoy *firewood*. This derivation process can be stated as follows:

DR-11 $\begin{pmatrix}+N\\+cncr\end{pmatrix}$ >→ $\begin{pmatrix}+V\\+[+PAT]\\-[+AGT]\\+afft\end{pmatrix}$ cncr = "concrete" afft = "affected"

[→ [mi-

A semantic shift has taken place with the following words which means the intake or consumption of certain food items instead of their acquisition. Examples include: mi-qicep *chew betel-nuts* from qicep *betel-nut* and mi-qepah *drink wine* from qepah *wine*.

The typical causative prefix pa- can also be used with concrete nouns to imply acquisition. If the subject is tireng nomako *myself*, Lit. *my body*, the utterance would have the idiomatic meaning of *let me have something*. Examples are: pa-titi *let someone have some meat*, pa-qicep *let someone have some betel-nut*, and pa-nanom *let someone have some water*. The derivational process can be covered by DR-11a which is similar to DR-11, with only a difference in morphophonemic statement:

DR-11a $\begin{pmatrix}+N\\+cncr\end{pmatrix}$ >→ $\begin{pmatrix}+V\\+[+PAT]\\-[+AGT]\\+afft\end{pmatrix}$

[→ [pa-

6.2.6 Verbs that Imply Companion

In Amis, there is the productive process to take a human noun and make it an implied companion or concomitant in a verb marked by mal-. These verbs take plural subject and are usually followed by a verbal complement. The derivation process which produces these verbs can be stated as follows:

DR-12 $\begin{pmatrix}+N\\+humn\end{pmatrix}$ >→ $\begin{pmatrix}+V\\+[+PAT]\\-[+AGT]\\+\_\_[-fint]\\\quad +Nom\\-\ -plrl\\+cmpn\end{pmatrix}$ fint = "finite" humn = "human" plrl = "plural" cmpn = "companion"

[→ [mal-

Examples include mal-wina *be-with-one's-mother* and mal-kaka *be-with-one's-elder-sibling*.

6.2.7 Verbs Derived from Derived Nouns

In Amis, there are verbs that are derived from derived nouns. Input to this type of derivation are deverbal nouns that show up in NP-NP constructions with the non-nominative actants carried over from their source verbs. Since they are secondarily derived, these verbs have two layers of affixation and are therefore quite complex in form. Examples are verbs that are considered instrumental focus (cf. sections 3.3.2.1) and locative or locus focus (cf. section 3.4.2.2) verbs.

An instrumental focus construction is a "passive", i.e., non-agent focus construction. According to Starosta, Pawley, and Reid (1982:13), passive constructions in Austronesian languages, especially in Philippine languages, are generally amenable to an NP-NP analysis which is significantly simpler than an alternative verbal approach. It is only in the relatively infrequent examples where a binary IC analysis is impossible that we can say with certainty that we are dealing with real verb focus. As shown in sections 3.3.2.1 and 3.3.3.1, Amis is a language blessed with a few such examples. The theoretical implication for Proto-Austronesian syntax is great. The occurrence of such verbal constructions in Tagalog and Amis has enabled Starosta, Pawley, and Reid (ibid.) to advance the hypothesis that verbal focus in Proto-Austronesian was only at an incipient stage and that the "passive" constructions were later developed from nominalisation.

From section 3.3.3.1 we have examples showing deverbal nouns used as subjects of NP-NP constructions. In section 3.3.2.1 we have examples with similar forms appearing unquestionably as the heads of verbal constructions. Consider the following examples:

(3.70) o kamay noniam ko sa-pinaro tina karirengan
hand lexcl *means-of-loading* *this* *cart*
[Neu] (Nom, +PAT) (Acc, +PAT)
we loaded this cart with our hands
Lit. *the means of loading this cart is our hands*

(3.71) o nanom no tebom ko sa-pibacaq noniam
water *well* *means-of-laundering* lexcl
[Neu] (Nom, +PAT) (Gen, +AGT)
we launder with well water
Lit. *our means of laundering is well water*

With these examples, the analysis is decidedly an NP-NP construction because the nominal predicates are clearly marked by the Neutral determiner o while the derived nouns which serve as subject are clearly marked by the Nominative determiner ko.

With the following examples, however, only a verbal analysis is possible. The absence of a determiner before the derived forms which appear in sentence initial position and the intervention of the subject before the Accusative Patient all point to a verbal analysis. Here I am quoting the few examples which appeared in section 3.3.2.1.

(3.54) sa-pa-ahcid ko cilaq to tood
used-for-making-something-salty *salt* *things*
[+V, +trns] [Nom, +INS] [Acc, +PAT]
salt is used for making things salty
or, *salt is used for salting things*

(3.56) sa-pi-angang nomako kina piqio to tamdaw
used-for-calling 1s *this* *whistle* *people*
[+V, +trns] [Gen, +AGT] [Nom, +INS] [Acc, +PAT]
I use this whistle to call people

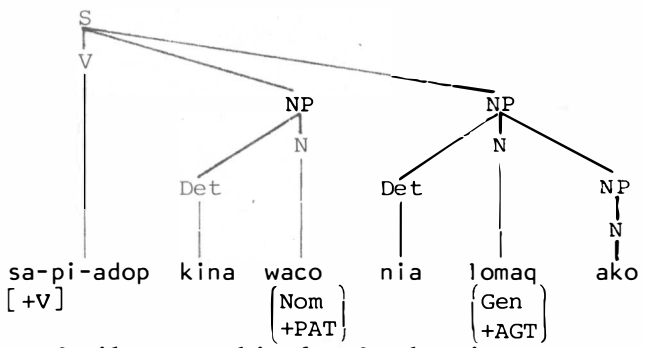
Intermediate between the clearly nominal and the clearly verbal constructions are some seemingly ambiguous examples which can be viewed as "passive" verbal constructions or as NP-NP constructions due to the resemblance of the genitive marker to the possessive marker in Amis. In our analysis, this does not cause much problem because, in an NP-NP construction, the derived noun is otherwise never found to be used in the predicate position. The verbal form, on the other hand, always appears in sentence-initial position. That the sentence-initial form is to be analysed as a V is also supported by the fact that it is not preceded by a determiner. If similar nominal predicates and verbal predicates had once co-existed in Proto-Austronesian, as hypothesised by Starosta, Pawley, and Reid, the contrast has already been lost in Amis.

Typical of ergative syntax, the marking for the genitive case form and that of a possessor are identical in Amis. This gives the following example an ambiguous analysis:

(3.57b) sa-pi-adop kina waco no lomaq ako
used-for-hunting *this* *dog* *family* 1s
[+V] [Nom, +PAT] ?
(i) *this dog is used for hunting by my family*
(ii) *this dog of my family's is used for hunting*

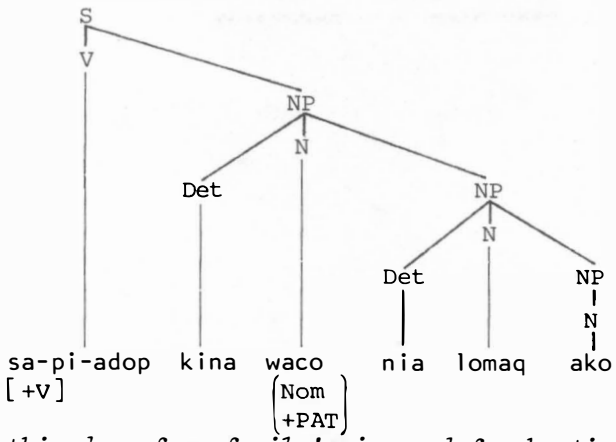
In this example, no lomaq ako can be analysed as (i) the Nominative Agent or as (ii) the possessor of waco *dog*, yielding respectively the first and the second reading given in the gloss. In either case, it should not affect a verbal analysis. This ambiguity can be illustrated by the following tree diagrams:

(i)



my family uses this dog for hunting

(ii)



this doy of my family's is used for hunting

The derivation relating the deverbal nouns and their corresponding instrumental verbs can be stated by the following rule:

DR-13

$$\begin{bmatrix} +N \\ \supset \begin{bmatrix} +PAT \\ \alpha F_i \end{bmatrix} \\ \supset \begin{bmatrix} +AGT \\ \beta F_j \end{bmatrix} \\ - \begin{bmatrix} +Gen \\ -AGT \end{bmatrix} \\ - \begin{bmatrix} +Acc \\ -PAT \end{bmatrix} \\ +cncr \end{bmatrix} \rightarrowtail \begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ +[+INS] \\ \supset \begin{bmatrix} +PAT \\ \alpha F_i \end{bmatrix} \\ \supset \begin{bmatrix} +AGT \\ \beta F_j \end{bmatrix} \\ - \begin{bmatrix} +Gen \\ -AGT \end{bmatrix} \\ - \begin{bmatrix} +Acc \\ -PAT \end{bmatrix} \\ - \begin{bmatrix} +Nom \\ -INS \end{bmatrix} \\ +nstr \end{bmatrix}$$

nstr = "instrumental"

DR-13 is a zero derivation. It copies from the source noun whatever marking there is onto the derived verb. As was indicated in sections 3.3.2.1 and 3.3.3.1, if the notional instrument is animate, the prefix mami- is used. If it is inanimate, we have the prefix sa- added to the source verb stem from which the nouns were derived. The addition of an obligatory Nominative Instrument is indicated by the "double negation" feature. Since no reinterpretation of CR's is required, the correspondence between the input AGT and the output AGT and that between the input PAT and the output PAT are redundantly stated in DR-13 with Greek letters and the implicational notation because I want to emphasise the similarity between the input and output matrices. By lexicase convention, however, any features of the source not expressed in either input or output are automatically carried over to the derived form, so DR-13 can be restated economically as follows:

DR-13a $\begin{pmatrix}+N\\+cncr\end{pmatrix} >\!\!\rightarrow \begin{bmatrix}+V\\ +[+PAT]\\ +[+AGT]\\ +[+INS]\\ -\begin{pmatrix}+Nom\\-INS\end{pmatrix}\\ +nstr\end{bmatrix}$

Besides the "instrumental focus" verbs, we also have a few examples of "locative focus" verbs in Amis. The examples are so rare that we have to conclude that Amis focus system is at best in its incipient stage, resembling the situation of Proto-Austronesian (cf. Starosta, Pawley, and Reid 1982). Like DR-13, the process for deriving "locative focus" verbs has far more nominal candidates for input than those that actually get derived into the verbal category. In other words, though the process is available, not many instrumental focus or locative focus verbs are found in Amis. Our observation is that in Amis nominalisation constructions like examples 3.70 and 3.71 cited above are far more frequently used to highlight a notional instrument or a notional locus than are "passive" constructions. Even if the nominalisation device is not used, there is still the complementation devices which were described in sections 3.3.3.2 and 3.4.3.2 that are commonly used in Amis to express notional instrument or locus. This probably accounts for the underdevelopment of the Amis focus system.

In the following, we will give an example of "locative focus" verbs derived from deverbal nouns and state the relationship between the two categories with DR-14. The example is taken from section 3.4.2.2 under Locus-focus in Amis.

(3.91) sa-singaq-an ko alili to tipos
place-for-storing *granary* *grain*
[+V] N^{0} $\begin{pmatrix}Nom\\+LOC\end{pmatrix}$ $\begin{pmatrix}Acc\\+PAT\end{pmatrix}$

grain is stored in the granary

Lit. *the granary is the place for storing grain*

The analysis of example 3.91 is clearly verbal. There is no determiner before the construction head to suggest that they should be nominal constituents and the position of the Accusative Patient makes it impossible to make an IC cut for an NP-NP construction. This is the only example I have in my data showing a derived "locative focus" verb with a deverbal source noun. The relatedness between the verb form and its source noun can be stated as follows:

DR-14

$$\begin{bmatrix} +N \\ \supset \begin{pmatrix} +PAT \\ \alpha F_i \end{pmatrix} \\ \supset \begin{pmatrix} +AGT \\ \beta F_j \end{pmatrix} \\ - \begin{pmatrix} +Gen \\ -AGT \end{pmatrix} \\ - \begin{pmatrix} +Acc \\ -PAT \end{pmatrix} \\ +lctn \\ +hbtl \end{bmatrix} \rightarrowtail \begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ +[+LOC] \\ \supset \begin{pmatrix} +PAT \\ \alpha F_i \end{pmatrix} \\ \supset \begin{pmatrix} +AGT \\ \beta F_j \end{pmatrix} \\ - \begin{pmatrix} +Gen \\ -AGT \end{pmatrix} \\ - \begin{pmatrix} +Acc \\ -PAT \end{pmatrix} \\ - \begin{pmatrix} +Nom \\ -LOC \end{pmatrix} \\ +lctn \\ +hbtl \end{bmatrix} \quad \begin{array}{l} lctn = \text{"location"} \\ hbtl = \text{"habitual"} \end{array}$$

What this rule says is that the case frame features of the source noun are carried over to the derived verb with the addition of a Nominative Locus. DR-14 is also a zero derivation. The C_1a-...an affixation on the source noun which indicates a habitual location is copied onto the derived verb.

DR-14 contains many features which remain unchanged but are redundantly listed in both the input and the output matrices. By lexicase convention it could be simplified as follows:

DR-14a

$$[+N] \rightarrowtail \begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ +[+LOC] \\ - \begin{pmatrix} +Nom \\ -LOC \end{pmatrix} \end{bmatrix}$$

Personally I prefer to have the input and output categories more fully specified as in DR-14 so that these categories can be immediately and uniquely identified.

6.3 Verbs Derived from Other Verbs

Amis verbs are grouped into seven primary verb classes according to their case frame features, as shown in Figures 5.1a and 5.1b in section 5.2. In the following diagram, we will list the seven primary verb classes with their characteristic case frames, with the number 1, 2, or 3 at the bottom of each matrix to indicate the number of positively marked case relations for each class. In the same diagram, we will also show schematically with fletched arrows how these Amis verb classes are related to one another derivationally.

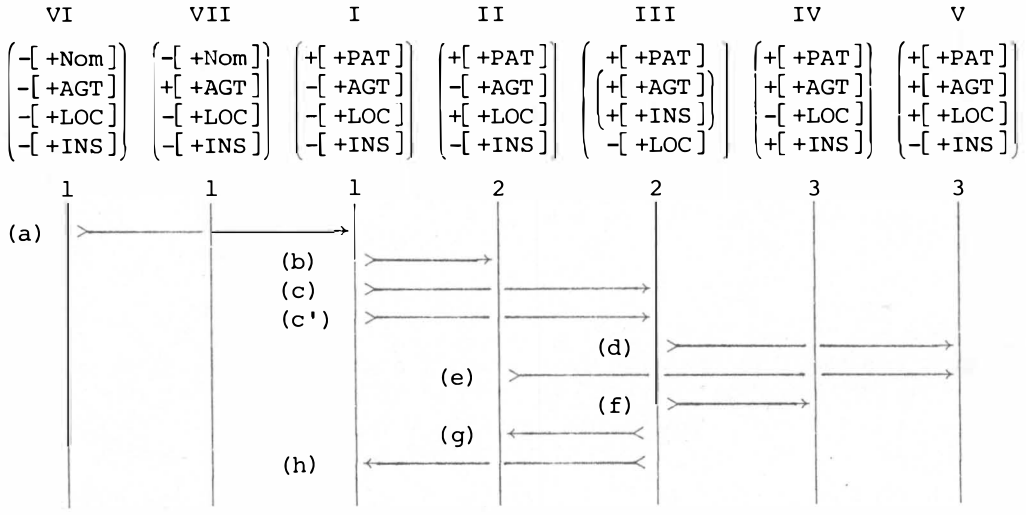


Figure 6.1 Derivational Processes Relating Amis Primary Verb Classes

Class VI is marked with the numeral 1 because it is considered subjectless but not patientless in our analysis. As shown in Figure 6.1, most fletched arrows point to the right direction meaning that most of the processes add a CR, as with processes (b), (c), (c'), (d), (e) and (f). Process (h) subtracts a CR. All other processes do not add or delete CR's, even though they may involve the reinterpretation of CR's.

Class III has been extended to include transitive verbs with [+[+PAT],+[+INS]] as well. Even though we have somewhat simplified the characteristic case frames of the non-instrumental and instrumental transitive verbs in Figure 6.1, it is to be understood that both subclasses are represented under class III. We indicate those derivations that add an AGT to class I verbs to make them members of class III as process (c) and those that add an INS as process (c').

Stated somewhat differently, these derivational processes relate verb class VI to verb class I, verb class I to verb class II, and so on, as shown in the following simplified tabulation:

(a)	VI	>→	I
(b)	I	>→	II
(c)	I	>→	IIIa, IIIb
(c')	I	>→	IIIc, IIId
(d)	III	>→	V
(e)	II	>→	V
(f)	III	>→	IV
(g)	III	>→	II
(h)	III	>→	I

In section 6.3.1 below, we will present Amis verbal derivation processes belonging to types that add CR's. In section 6.3.2, we will deal with the remainder of the processes listed in Figure 6.1.

6.3.1 Derivations that Add CR's

In this section, we will present some Amis verbal derivational rules belonging to types (b), (c), (c'), (d), (e), and (f) which are schematically shown in Figure 6.1 to be processes that add a CR to the source.

6.3.1.1 Adding an AGT

Referring to Figure 6.1, we see that both type (c) and type (e) derivation processes add an Agent to the case frame of the source verb. Type (c) is typically referred to as "transitivisation" though some DR's relating class I and class III join in with processes in type (d) to form a group of DR's known as "causativisation". While these DR's involve the addition of an Agent, they do not necessarily involve any other change in the case frame feature specifications of the source verb as these features are carried over to the derived verb. In other words, they may not require a reinterpretation of the CR's even though a "new" Agent is added.

6.3.1.1.1 Transitivisation

According to our definition of transitivity, the adding of an AGT or an INS to the case frame of an intransitive verb will make it transitive. Therefore, both process (c) and process (c') are transitivisation processes. In this subsection, we will deal only with type (c) derivation processes that add an AGT to the case frames of the source verbs.

In Amis, one group of simple intransitive verbs from class I that can be derived into simple transitive verbs of class III are the verbs that indicate psychological states. These verbs are typically marked by the prefix ma- and the same morphological form is carried over with transitivisation. Examples include ma-olah which means *pleased, happy* when it is intransitive and *like, love* when it is transitive; ma-talaw which means *frightened* when intransitive and *afraid-of* when transitive; and ma-calibad which means *angry* when intransitive and *angry-at* when transitive. More examples can be found in sections 5.2.1 and 5.2.2.

The reason I am positing a direction of derivation from intransitive to transitive instead of the other way round is that ma- is typically a prefix for intransitive stative verbs and that an accusative transitive verb with a ma- instead of the typical mi- prefix is highly marked. This transitivisation process can be stated as follows:

DR-15

$$\begin{bmatrix} +V \\ +[+PAT] \\ -[+AGT] \\ \supset \begin{pmatrix} +PAT \\ \alpha F_i \end{pmatrix} \\ -\begin{pmatrix} +Nom \\ -PAT \end{pmatrix} \\ +psch \end{bmatrix} \rightarrowtail \begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ \supset \begin{pmatrix} +AGT \\ \alpha F_i \end{pmatrix} \\ -\begin{pmatrix} +PAT \\ +spcf \end{pmatrix} \\ +psch \end{bmatrix}$$

spcf = "specific"

psch = "psychological"

The elimination of features similarly marked in both the input and the output matrices may again yield a simpler representation here. Since the operation is simple and straightforward, I am not going to repeat it for every derivation rule in this study, especially when the merit of simplicity is not obvious.

Referring to SR-13 and SR-16, we know that class I psychological verbs are stative verbs. By RR-2, we know that an agentive verb is transitive. If the AGT is realised in the Genitive case form, then, by RR-3, the verb is ergative. Otherwise, the verb is non-ergative or accusative. The derived forms are used only with non-specific objects as in the following examples:

(6.8) ma-olah kako to boting
like 1s *fish*
$\begin{pmatrix} +V \\ +trns \\ -ergv \end{pmatrix}$ $\begin{pmatrix} Nom \\ +AGT \end{pmatrix}$ $\begin{pmatrix} Acc \\ +PAT \\ -spfc \end{pmatrix}$
I like fish

(6.9) ma-talaw cira to kawas
afraid-of 3s *ghosts*
$\begin{pmatrix} +V \\ +trns \\ -ergv \end{pmatrix}$ $\begin{pmatrix} Nom \\ +AGT \end{pmatrix}$ $\begin{pmatrix} Acc \\ +PAT \\ -spfc \end{pmatrix}$
he is afraid of ghosts

These derived verbs may be further derived by process (g) into class II specific-object intransitives, making it seem as though these verbs had directly derived into class II through process (b). This sequence of derivation can be sketched as follows:

$$\text{I} \xrightarrow{(c)} \text{III} \xrightarrow{(g)} \text{II} = \text{I} \xrightarrow{(b)} \text{II}$$

We will deal with process (b) in section 6.3.1.3 and process (g) in section 6.3.2.3.1 below.

6.3.1.1.2 Causativisation

In section 3.2.3.2 we have briefly reviewed the lexicase claim that the "causer" of a derived causative verb is actually a grammatical Agent (Starosta 1974:285, 1978:12-17,40-42). Figure 3.2 illustrates Starosta's counter-proposal to Steven's case assignment for causative constructions (Stevens 1973). The Amis data easily support this claim because, as we shall see below, the introduction of a "new" Agent in causative constructions does not even require the reassignment of case relations.

Causative verbs in Amis are morphologically marked by the prefix pa-. Syntactically, they differ from their non-causative source forms in having an Agent added to their case frames. While the source verbs may or may not have a co-occurring AGT, corresponding derived causative verbs always have one. The "new" AGT introduced by the DR is referred to as the causer of the action. With the presence of an Agent, all causative verbs are by definition transitive verbs. Depending on the case features of the source verbs, different types of causative verbs are created. In Amis, we find that class I, class II, and class III verbs can all serve as input to causativisation, thus making causativisation the most productive syntactic derivation process for Amis verbs.

Corresponding to the broad application of causative derivations, the meaning and form of a causative verb varies according to the categorisation of its source verb. In general, a causative verb denotes an indirect action with the Agent causing, directing, or allowing the occurrence of what is designated by the verb base, be it a change of state or an action (DeGuzman 1978:337).

Causativisation relating class I intransitive verbs to class III transitive verbs is in essence a transitivisation process. The derivation process is considered causativisation because we can gain greater generalisation in doing so. All causative verbs show the characteristic prefix pa- which the transitivisation process described in section 6.3.1.1.1 does not produce. Also, there is this "indirect action" meaning which is different from the interpretation of simple transitive verbs.

Examples of causative verbs derived from class I intransitive verbs include the following:

(6.10)

pa-qahen	to	haw	cira	to	hemay?
provided-for, obtain (by begging)	*already*	QM	3s		*rice*
[+V, +trns, -ergv, +caus]	[+Adv]		[Nom, +AGT]		[Acc, +PAT, -spfc]

has he been provided for with some rice?

(6.11)

aka	[pa-qoning	to	cabang]
do-not	*make-something-dirty*		*wall*
[+V, +xlry, +ngtv, +mptv]	[+V, +fint, +trns, -ergv, +caus]		[Acc, +PAT, -spfc]

don't make the walls dirty

(6.12) pa-ta-ini henaca to apol
bring, cause-to-be-here *please* *lime(stone)*
[+V, +trns, -ergv, +mptv, +caus] [Acc, +PAT, -spfc]
please bring (me) some lime(stone)

(6.13) pa-qisiq ko wawa ano ma-botiq
make-someone-urinate *child* *if* *sleep*
[+V, +trns, +ergv, +mptv, +caus] [Nom, +PAT] [+V]
have the child urinate before going to bed

(6.14) pa-ka-motaq-en ko ma-lasang-ay,
caused-to-vomit *drunk-person*
[+V, +trns, +ergv, +mptv, +caus] [Nom, +PAT]

kia ma-ngaay ko tireng nira
so-that *well* *body, health* 3s
[+V] [Nom, +PAT]
induce the drunk man to vomit, so he'll feel better

(6.15) pa-pi-oliq-en kami ni ama niam i lotok nacila
told-to-go-gather-alfafa-grass lexcl *Father* lexcl *hill* *yesterday*
[+V, +trns, +ergv, +caus] [Nom, +PAT] [Gen, +AGT] [Lcv, +PLC] [+Adv, +TIM]
our father sent us to the mountains to gather alfafa grass

Even though all these derived causative verbs have their source in class I and end up with the characteristic causative prefix pa- in all the derived forms, the source verbs can be quite diverse in form. For example, pa-qoning *make-something-dirty* has as its source the intransitive verb si-qoning *dirty*, pa-ta-ini *bring* is derived from ta-ini *come*, pa-qisiq *make-someone-urinate* from mi-qisiq *urinate*, and pa-pi-oliq-en *told-to-go-gather alfafa-grass* from mi-oliq *gather-alfafa-grass*.

In the imperative sentences, examples 6.11 to 6.14, the second person, be it AGT or PAT in the analysis, is usually understood. The negative imperative sentence, i.e., example 6.11 has as its main verb the auxiliary verb aka *do not* which is followed by a finite complement. I have also considered analysing the form aka into two constituents, namely, the irrealis auxiliary verb a and the negative preposition ka, but then we would have to have a different set of negative infinitive forms to go with the negative imperative, in addition to

the set of infinitive forms after preposition a and that after the negation verb caay and the negative preposition ka. I would like to leave this issue open for future investigation.

As shown by the examples, derived causative verbs are found in both the ergative and the accusative subcategories of class III. The causative derivation relating class I intransitive verbs and class IIIb ergative verbs can be stated as follows:

DR-16

$$\begin{bmatrix} +V \\ +[\,+PAT\,] \\ -[\,+AGT\,] \\ -[\,+INS\,] \end{bmatrix} \rightarrow\!\!> \begin{bmatrix} +V \\ +[\,+PAT\,] \\ +[\,+AGT\,] \\ -[\,+INS\,] \\ -\begin{pmatrix} +Nom \\ -PAT \end{pmatrix} \\ -\begin{pmatrix} Gen \\ -AGT \end{pmatrix} \\ +caus \\ (+mptv) \end{bmatrix}$$

$$\begin{Bmatrix} [\,ka- \\ [\,si- \\ [\,mi- \end{Bmatrix} \rightarrow [\,pa-$$

$$[\rightarrow [\,pa-$$

The combination of contextual features [+[+PAT],+[+AGT]] is equivalent to [+trns] (transitive) and the combination of Nominative Patient and Genitive Agent means [+ergv] (ergative). Like the use of CF labels, the shorter notations are used in the sentence examples throughout. Though an AGT is introduced, the CR's are not reinterpreted. The correspondences can be schematically represented as follows:

Nominative PAT $\succ\!\!\longrightarrow$ Nominative PAT
ϕ $\succ\!\!\longrightarrow$ Genitive AGT

The causative derivation rule relating class I intransitive verbs and class IIIa accusative verbs can be stated as follows:

DR-17

$$\begin{bmatrix} +V \\ +[\,+PAT\,] \\ -[\,+AGT\,] \\ -[\,+INS\,] \end{bmatrix} \rightarrow\!\!> \begin{bmatrix} +V \\ +[\,+PAT\,] \\ +[\,+AGT\,] \\ -[\,+INS\,] \\ -\begin{pmatrix} +Acc \\ -PAT \end{pmatrix} \\ -\begin{pmatrix} +PAT \\ +spfc \end{pmatrix} \\ -\begin{pmatrix} +Nom \\ -AGT \end{pmatrix} \\ +caus \\ (+mptv) \end{bmatrix}$$

$$[\rightarrow [\,pa-$$

The combination of Nominative Agent and Accusative Patient is equivalent to [-ergv] (non-ergative or accusative). In both DR-16 and DR-17, an AGT is introduced into the output matrix. The PAT in the source is not reinterpreted as some other case relation even though, in the case of a derived accusative causative verb, it is realised in the accusative case form and is to be interpreted as being non-specific.

The causative imperative forms belonging to class III do not seem to have a uniform form either. Some, such as examples 6.14 and 6.15, show the characteristic imperative suffix -en for class Vb, while others just appear in their pa- prefixed stems. Other than the case frame and morphological features already stated in DR-16 and DR-17, it is difficult to make any generalisation about the exact morphological shapes of the input and output forms.

What we have done so far is to describe the derivational processes represented as type (c) in Figure 6.1. These DR's relate class I intransitive verbs to class III derived causative verbs by adding an AGT to the case frames of the source verbs. Now we will look at process (d) which, as shown in Figure 6.1, also adds a CR. Since the output of process (d) are derived causative verbs, we assume that an Agent designating the indirect cause is added. Superficially, however, the case frames show that a LOC is added instead. By looking into the way the CR's are reinterpreted, we find out that process (d) only represents an indirect derivational link between class IIIa accusative verbs and class Vb ergative causative verbs. In other words, process (d) may result from the successive application of process (g) and process (e). The adding of these processes can be sketched as follows:

$$\text{III} \xrightarrow{(g)} \text{II} \xrightarrow{(e)} \text{V} \quad = \quad \text{III} \xrightarrow{(d)} \text{V}$$

Our examples show that class Vb causative verbs always have specific objects that are manifested as Locative Locus in the construction. They correspond to the specific objects of their class II source verbs. As a matter of fact, taking the path from class II to class Vb makes it unnecessary to reinterpret CR's, since reinterpretation has already been taken care of by the detransitivisation process (g). However, since I consider all class II specific-object intransitives to be derived from class IIIa by process (g), the real ultimate sources of the causative derivation should still be in class IIIa. Schematically, the reinterpretation of CR's can be represented as follows:

IIIa		II		Vb
Nom AGT	⟶	Nom PAT	⟶	Nom PAT
Acc PAT	⟶	Loc LOC	⟶	Loc LOC
		∅	⟶	Gen AGT

The following pairs of examples clearly show a relationship between class II and class V. They are accounted for by process (e).

(6.16a) kia mi-qonqon to saw itakoan?
how-come *rush* QM 1s
$\begin{bmatrix}+V\\+xlry\end{bmatrix}$ $\begin{bmatrix}+V\\+fint\\-trns\end{bmatrix}$ $\begin{bmatrix}Lcv\\+LOC\\+spfc\end{bmatrix}$
how come you are rushing me?

(6.16b) (pa-)pi-qonqon-en ci Pohang ici ama-an
have-someone-go-rush-someone-else *Pohang* *Father*
[+V, +trns, +ergv, +mptv, +caus] [Nom, +PAT] [Lcv, +LOC, +spfc]
have Pohang go rush/hurry Father

(6.17a) mi-alod cira itakoan
throw-at 3s 1s
[+V, -trns] [Nom, +PAT] [Lcv, +LOC, +spfc]
he is throwing (something) at me

(6.17b) pa-pi-alod-en haw cira itisoan?
allowed-to-throw-at-someone QM 3s 2s
[+V, +trns, +ergv, +mptv, +caus] [Nom, +PAT] [Lcv, +LOC, +spfc]
would you let him throw at you?

Not all class Vb derived causative verbs are imperative. In addition to example 6.15, in the following, I have examples corresponding to 6.16b and 6.17b to show the non-imperative counterparts of class Vb imperative causative verbs. The non-second person Genitive Agent is overtly expressed in these examples.

(6.16c) (pa)pi-qonqon-en ako ci Pohay ici ama-an
have-someone-rush-someone-else 1s *Pohay* *Father*
[+V, +trns, +ergv, +caus] [Gen, +AGT] [Nom, +PAT] [Lcv, +LOC, +spfc]
I have Pohay (go) rush/hurry Father

(6.17c) pa-pi-alod-en ni ina cira tina mali-an
allowed-to-throw *Mother* 3s *this* *ball*
[+V, +trns, +ergv, +caus] [Gen, +AGT] [Nom, +PAT] [Lcv, +LOC, +spfc]
Mother allows him to throw this ball

Interestingly enough, class IIIb ergative transitive verbs do not serve as input to causative derivations in Amis even though all class Vb derived causative verbs are ergative. All our examples show class Vb causative verbs to be directly derived from class II specific-object intransitives which correspond to class IIIa accusative transitive verbs. If we consider class II instead of class IIIa as the direct input to the derivation rules that create

class Vb causative verbs, the problem of changing from [-ergv] to [+ergv] vanishes. Class II verbs are intransitive and are hence unmarked for ergativity.

The derivational processes which produce both the imperative and the non-imperative causative verbs in class Vb can be formulated in one single general rule as follows:

DR-18

$$\begin{bmatrix} +V \\ +[\,+PAT\,] \\ +[\,+LOC\,] \\ -[\,+AGT\,] \\ -\begin{pmatrix} +LOC \\ -spfc \end{pmatrix} \end{bmatrix} >\!\!\rightarrow \begin{bmatrix} +V \\ +[\,+PAT\,] \\ +[\,+LOC\,] \\ <+[\,+AGT\,]> \\ -\begin{pmatrix} Gen \\ -AGT \end{pmatrix} \\ +caus \\ <-mptv> \end{bmatrix}$$

$$\begin{matrix} [mi & \rightarrow [pa\text{-}pi\text{-} \\ ] & \rightarrow -en] \end{matrix}$$

DR-18 adds an AGT to a class II specific-object intransitive verb and creates from it a class Vb causative verb. The newly added AGT is realised in the Genitive case form. This is at once a transitivisation and causativisation process. The output is an ergative transitive verb which has an "indirect action" interpretation. The process as stated in DR-18 is simple and straightforward. No reinterpretation of CR's is required since the newly added AGT does not conflict with one which was previously present. The characteristic prefix of class II specific-object intransitive verb mi- is changed into the characteristic affix pa-pi-...-en of class Vb, as shown by the morphophonemic subparts of DR-18.

There is also a causativisation process which relates class IIIa to class Va. This process belongs to type (d) shown in Figure 6.1 and is not reinterpretable as the sum of process (g) and process (e). Since this process adds a LOC to the case frame of the source verb, we will discuss it in section 6.3.1.3.

To sum up, process (c) and process (e) each adds an AGT to the source case frames to create new verbs. When considered together with process (g), these processes can account for the links between verb classes I, II, IIIa, and Vb. The path taken by a simple intransitive verb to become a class Vb causative verb can be schematised as follows:

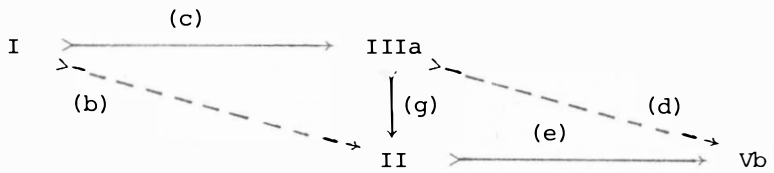


Figure 6.2 The Paths Leading from Intransitive to Causative

We will deal with process (g) in section 6.3.2.3 and return to a brief discussion of process (b) together with process (d) in section 6.3.1.3 below.

6.3.1.2 Adding an INS

Class I verbs can also add on an INS to become class III transitive verbs. The derivation processes were represented as process (c') in Figure 6.1. Consider the following examples from class IIId described in section 5.2.3.2:

(5.63) ma-cocaq kako no anaboq
irritated (in the eye) 1s *dust*
[+V, +trns, +ergv] [Nom, +PAT] [Gen, +INS]
I am irritated (in the eye) by the dust

(5.64) ma-palawad ko balocoq nomako nina radiw
moved *heart* 1s *this* *song*
[+V, +trns, +ergv] [Nom, +PAT] [Gen, +INS]
my heart is moved by this song

These class IIId ma- verbs are clearly different from those psychological verbs derived by DR-15. They differ in terms of case marking, case frame features, and ergativity.

It has been mentioned in section 6.3.1.1 under Transitivisation that, parallel to an AGT, an INS can also be added to the case frame of an intransitive verb to produce a transitive verb. Taken in isolation, examples 5.63 and 5.64 can be analysed as having a Genitive Agent instead of a Genitive Instrument since we do not accept animateness as a criterion for distinguishing AGT and INS. But, if we take the whole case system into consideration, we would find that an agentive analysis is impossible. Compare example 6.9 with example 5.63 which are cited again below:

(6.9) ma-talaw cira to kawas
afraid-of 3s *ghosts*
[+V, +trns, -ergv] [Nom, +AGT] [Acc, +PAT, -spfc]
he is afraid of ghosts

(5.63) ma-cocaq kako no anaboq
irritated (in the eye) 1s *dust*
[+V, +trns, +ergv] [Nom, +PAT] [Gen, +INS]
I am irritated (in the eye) by the dust

Though superficially the two verbs look similar, they belong to two different subclasses by virtue of their different case markings. Correspondingly they cannot have identical case frames. To derive a class IIId verb like ma-cocaq *irritated (in the eye)* from its corresponding class I source, we have the following derivation rule:

DR-19

$$\begin{bmatrix} +V \\ +[+PAT] \\ -[+AGT] \\ -[+INS] \end{bmatrix} >\!\!\rightarrow \begin{bmatrix} +V \\ +[+PAT] \\ -[+AGT] \\ +[+INS] \\ -\begin{bmatrix} +Gen \\ -INS \end{bmatrix} \\ +psch \end{bmatrix}$$

The derived verb is by definition transitive and ergative. DR-19, like DR-15, is a transitivisation process.

We can also derive class IIIc accusative causative verbs from class I quality verbs, as the following examples will show:

(6.18) pa-ahcid ko cilaq to kabi
make-something-salty *salt* *soup*
$\begin{bmatrix} +V \\ +trns \\ -ergv \\ +caus \end{bmatrix}$ $\begin{bmatrix} Nom \\ +INS \end{bmatrix}$ $\begin{bmatrix} Acc \\ +PAT \\ -spfc \end{bmatrix}$
the salt makes the soup salty

(6.19) (sa-)pa-ahcid ko cilaq to tood
used-for-making-something-salty *salt* *things*
$\begin{bmatrix} +V \\ +trns \\ -ergv \\ +caus \end{bmatrix}$ $\begin{bmatrix} Nom \\ +INS \end{bmatrix}$ $\begin{bmatrix} Acc \\ +PAT \\ -spfc \end{bmatrix}$
salt is used for making anything salty

(6.20) sa-pa-ka-asoq ko cilaq to sinabel
used-for-making-something-tasty *salt* *food*
$\begin{bmatrix} +V \\ +trns \\ -ergv \\ +caus \end{bmatrix}$ $\begin{bmatrix} Nom \\ +INS \end{bmatrix}$ $\begin{bmatrix} Acc \\ +PAT \\ -spfc \end{bmatrix}$
salt is used for making the food tasty

Other than saying that the characteristic prefix pa- is present in all the derived causative forms, we do not know when and why a root form, as opposed to a prefixed stem, of a quality stative verb would be used as the source of derivation. For example, pa-qoning *make-something-dirty* from example 6.11 has as its source the intransitive verb si-qoning *dirty*, pa-ahcid *make-something-salty* and sa-pa-ahcid *used-for-making-something-salty* have as their source the verb ahcid *salty* in its root form, and sa-pa-ka-asoq *used-for-making-something-tasty* uses a derived stem ka-asoq instead of the root form asoq *tasty* which can be used on its own as the main verb of a sentence. This may seem chaotic, but it is typical for derivations to demonstrate such sporadic behaviour. Similar forms may have come from different sources by analogy. And, even though the mechanisms are there, certain vocabulary items would not undergo certain derivational processes, thus leaving gaps in the lexicon.

So far our examples of class III causative verbs derived from class I quality verbs through the adding of an INS are all accusative. Their case frames are typical of class IIIc. This causative derivation can be stated in a rule parallel to DR-17 as follows:

DR-20

$$\begin{bmatrix} +V \\ +[+PAT] \\ -[+AGT] \\ -[+INS] \end{bmatrix} >\!\!\rightarrow \begin{bmatrix} +V \\ +[+PAT] \\ -[+AGT] \\ +[+INS] \\ -\begin{pmatrix} Acc \\ -PAT \end{pmatrix} \\ -\begin{pmatrix} +PAT \\ +spfc \end{pmatrix} \\ -\begin{pmatrix} +Nom \\ -INS \end{pmatrix} \\ +caus \end{bmatrix}$$

$$\begin{pmatrix} [ka- \\ [si- \end{pmatrix} \rightarrow [(sa-)pa-$$

$$[\rightarrow [(sa-)pa-$$

The optional prefix sa- actually signals another derivational process which derives an instrumental verb from a causative stem. Since the process does not change any case or morphological features, we are not going to deal with it here.

We can combine DR-17 and DR-20 to make a more general statement about derivational processes that add an AGT or an INS. DR-21 can be viewed as a generalised transitivisation and causativisation process that produce accusative causative verbs from class I. In it, process (c) and process (c') are combined.

DR-21

$$\begin{bmatrix} +V \\ +[+PAT] \\ -[+AGT] \\ -[+INS] \end{bmatrix} >\!\!\rightarrow \begin{bmatrix} +V \\ +[+PAT] \\ \quad [+AGT] \\ +[+INS] \\ -\begin{pmatrix} +Acc \\ -PAT \end{pmatrix} \\ -\begin{pmatrix} +PAT \\ +spfc \end{pmatrix} \\ -\begin{pmatrix} +Nom \\ \begin{pmatrix} -AGT \\ -INS \end{pmatrix} \end{pmatrix} \\ +caus \end{bmatrix}$$

$$\begin{pmatrix} [ka- \\ [si- \\ [mi- \end{pmatrix} \rightarrow [pa-$$

$$[\rightarrow [pa-$$

In DR-21, an AGT or an INS is introduced into the output matrix. The PAT in the source is not reinterpreted as some other case relation even though, in the case of a derived accusative causative verb, it is realised in the accusative case form and is to be interpreted as being non-specific.

Another derivational process that adds an INS belongs to type (f). As shown schematically in Figure 6.1, it takes a class III transitive verb and adds an INS to its case frame to make it a class IV instrumental transitive verb. This is not a very productive process in Amis. What it does is to overtly express a notional means within the case system, as the following examples from section 5.2.4 will show:

(5.70) tomes-en nomako a [mi-pinaro]
filled-up 1s *fill*
[+V, +trns, +ergv] [Gen, +AGT] [+V, -fint]

to simal kina si-natoik
oil *this* *bottle*
[Acc, +INS] [Nom, +PAT]

I filled the bottle up (full) with oil

Lit. *the bottle filled up (full) with oil by me*

(5.72) pinaro-i to bingkos kina koakoq nomiso
fill *shredded-tobacco* *this* *pipe* 2s
[+V, +trns, +ergv, +mptv] [Acc, +INS] [Nom, +PAT]

fill your pipe with some tobacco!

A genitive AGT is understood in example 5.72, so both of the verbs have the same case frame. The accusative INS is to be interpreted as the means or "intermediate cause" of the action. The derivational source of tomes-en *filled-up* is probably a corresponding form from class III; and the source of pinaro-i *fill* is most likely mi-pinaro *fill*, seen in example 5.70.

6.3.1.3 Adding a LOC

It was mentioned in section 6.3.1.1.1 that process (b) which adds a LOC to class I source verbs could very well be the sum of process (c) and process (f), the former transitivising class I verbs into class III verbs and the latter taking class III verbs and detransitivising them into class II. All the class II verbs in examples 5.44-5.48 in section 5.2.2 are specific-object intransitives derived from class III sources. We can say with confidence that, for every specific-object intransitive verb in class II, we have a corresponding class III transitive verb with non-specific object, so we do not need a separate process (b).

In section 6.3.1.1.2 above, we have encountered the derivational process (d) which, like process (b), represents the sum of two processes. As shown by examples 6.16a-6.16c and examples 6.17a-6.17c, process (d) relates verb class III to verb class V in two steps, first by process (g) and then by process (e).

This indirect path going from III to II, and from II to V, is more natural than the seemingly more direct path from class III to V which will involve extensive reinterpretation of the case features. Specifically, when a class Vb ergative causative verb is derived from a class IIIa accusative transitive source, if we accept process (d) as the direct path of derivation, we would have to reinterpret both the Agent and the Patient in the source in addition to the adding of a new Agent. The switch from [-ergv] to [+ergv] is highly marked. If we accept the indirect path of derivation, we would not have to reinterpret any case features already assigned to class II. Only the genitive Agent is added.

Class Va causative verbs, however, are directly derived from class IIIa verbs by process (d) as the following pair of examples would suggest:

(6.21a) mi-ala kako to qelon
fetch 1s *chair*
$\begin{bmatrix}+V\\+trns\\-ergv\end{bmatrix}$ $\begin{Bmatrix}Nom\\+AGT\end{Bmatrix}$ $\begin{bmatrix}Acc\\+PAT\end{bmatrix}$
I fetched a/the chair

(6.21b) pa-pi-ala cira itakoan to toper nira
have-someone-get-something 3s 1s *hat* 3s
$\begin{bmatrix}+V\\+trns\\-ergv\\+caus\end{bmatrix}$ $\begin{bmatrix}Nom\\+AGT\end{bmatrix}$ $\begin{bmatrix}Lcv\\+LOC\end{bmatrix}$ $\begin{bmatrix}Acc\\+PAT\end{bmatrix}$
he told me to fetch his hat (for him)

The correspondence between mi-ala *get* and pa-pi-ala *have-someone-get-something* requires the reinterpretation of the original AGT as LOC, thus leaving room for the new AGT that is introduced by the derivation process. The PAT remains unchanged. It seems that this derivation process does not go through class II as an intermediate source. Instead, it goes directly from class IIIa to class Va, with the input and the output agreeing with each other with respect to the feature of ergativity. Both are accusative. This process can be formulated as follows:

DR-22

$$\begin{bmatrix}+V\\+[+PAT]\\+[+AGT]\\-[+LOC]\\\supset\begin{bmatrix}+AGT\\\alpha F_j\end{bmatrix}\\-ergv\end{bmatrix} \rightarrowtail \begin{bmatrix}+V\\+[+PAT]\\+[+AGT]\\+[+LOC]\\\supset\begin{bmatrix}+LOC\\\alpha F_j\end{bmatrix}\\-ergv\\+caus\end{bmatrix}$$

[mi- → [pa-pi-

The introduction of a "new" AGT into the case frame causes the original AGT to be reinterpreted here as LOC. The correspondences can be schematically represented as follows:

ϕ	>→	Nominative AGT
Nominative AGT	>→	Locative LOC
Accusative PAT	>→	Accusative PAT

This wraps up our description of some Amis verbal derivational processes that add a CR to the case frames of the source verbs. In the next section, we will deal with some verbal derivational processes that reinterpret the CR's in the source case frames but do not add any CR's.

6.3.2 Derivations that Do Not Add CR's

In the previous section, we have seen verbal DR's that add a CR to the source case frame. Since only the basic case relation, i.e., the PAT, and inner case relations, i.e., AGT, LOC, and INS by the present study, are admitted into case frames for the purpose of defining the primary verb classes, a case relation introduced by a derivational process must be one of the three inner case relations. We have covered the DR's that add an AGT, an INS, or a LOC in sections 6.3.1.1, 6.3.1.2, and 6.3.1.3 respectively.

In this section, we are going to examine those DR's that do not add CR's, including the detransitivisation processes (g) and (h) shown in Figure 6.1. The DR's we are going to see here involve primarily the reinterpretation of CR's accompanied by a change in perspective. When a PAT actant is reinterpreted as some other CR, it is said to be "demoted" from the central position. When a non-Patient actant gets reinterpreted as a Patient, we say that it is "promoted" to the central position. There are also examples where the PAT actant remains unchanged while other CR's are reinterpreted. Example 6.21b from section 6.3.1.3 is one of such examples.

Referring back to Figure 5.2, we are reminded of the fact that classes III, IV, and V can be subcategorised in terms of the feature of ergativity. We also recall that the membership of class IVa verbs is largely undecided so it is futile to talk about derivation to and from an empty class. An interesting issue concerns the relationships between accusative and ergative verbs in a split ergative language such as Amis. In section 6.3.2.3, an attempt is made to show that class IIIa is related to class IIIb, and class Va to class Vb, only in an indirect way, via the process of detransitivisation. Two process types, namely, (g) and (h) as represented in Figure 6.1 would be studied.

Other processes that involve a reinterpretation of CR's include process type (a) that was also schematically represented in Figure 6.1.

6.3.2.1 Acquiring a PAT Subject

The relatedness between class VI impersonal intransitive verbs and class I simple intransitive verbs can be expressed by a DR of type (a). As we have analysed the impersonal verbs as being subjectless but not patientless, the derivation process linking them does not add on a PAT. Instead, the process can be looked upon as one involving the reinterpretation of the TIM or PLC case relation in the input matrix as the Patient subject. There is the apparent feature change from [-[+Nom]] to [+[+Nom]] and the omission of the co-occurring TIM or PLC in the output. The PAT case relation, being the basic case relation, is necessarily marked on the Nominative actant of the derived verb.

Normally, TIM and PLC are considered outer case relations in the lexicase model. As such, they do not participate in the characterisation of verbs or verb classes and hence should not be included as input features for DR's. This assumption poses some difficulty for the present analysis which would have to impose an inner role interpretation for TIM and PLC since they are the part of the input matrix which gets reinterpreted as Nominative Patient in the case frame of the derived verb. The derivational relationship between class VI and class I verbs can be stated as follows:

DR-23

$$\begin{bmatrix} +V \\ -[+Nom] \\ -[+AGT] \\ \supset \left(\begin{bmatrix} +[+PLC] \\ +[+TIM] \end{bmatrix} \right) \\ \alpha F_i \\ -\left(\begin{bmatrix} +Lcv \\ \begin{bmatrix} -PLC \\ -TIM \end{bmatrix} \end{bmatrix} \right) \end{bmatrix} \rightarrow \begin{bmatrix} +V \\ +[+Nom] \\ -[+AGT] \\ \supset \begin{bmatrix} +PAT \\ \alpha F_i \end{bmatrix} \\ -\begin{bmatrix} +Nom \\ -PAT \end{bmatrix} \end{bmatrix}$$

The correspondence between the locative Locus or Time and the nominative Patient is shown by the "horseshoe" notation. No morphophonemic statement needs to be made because this is a zero derivation. Examples include:

(6.21a) si-kawas$_1$ i lomaq
there-are-ghosts *house*
$\begin{bmatrix} +V \\ -[+Nom] \\ -[+AGT] \end{bmatrix}$ $\begin{bmatrix} Lcv \\ +PLC \end{bmatrix}$
there are ghosts in the house

(6.21b) si-kawas$_2$ kina lomaq
there-are-ghosts *this* *house*
$\begin{bmatrix} +V \\ +[+Nom] \\ -[+AGT] \end{bmatrix}$ $\begin{bmatrix} Nom \\ +PAT \end{bmatrix}$
there are ghosts in this house
Lit. *this house is haunted*

(6.22a) orad-an$_1$ itina remiad
rain *this* *day*
$\begin{bmatrix} +V \\ -[+Nom] \\ -[+AGT] \end{bmatrix}$ $\begin{bmatrix} Lcv \\ +TIM \end{bmatrix}$
it is raining today

(6.22b) orad-an$_2$ kina remiad
rain *this* *day*
$\begin{bmatrix} +V \\ +[+Nom] \\ -[+AGT] \end{bmatrix}$ $\begin{bmatrix} Nom \\ +PAT \end{bmatrix}$
it is raining today
Lit. *today is raining*

(6.23a) toqman$_1$ i parod
dark *kitchen*
$\begin{pmatrix} +V \\ -[+Nom] \\ -[+AGT] \end{pmatrix}$ $\begin{pmatrix} Lcv \\ +LOC \end{pmatrix}$
it is dark in the kitchen

(6.23b) toqman$_2$ ko parod
dark *kitchen*
$\begin{pmatrix} +V \\ +[+Nom] \\ -[+AGT] \end{pmatrix}$ $\begin{pmatrix} Nom \\ +PAT \end{pmatrix}$
it is dark in the kitchen
Lit. *the kitchen is dark*

6.3.2.2 Passive Derivation

Amis transitive verbs can be subcategorised with the feature [±ergv]. As shown in Figure 5.2, verb classes III, IV, and V can each be divided into accusative and ergative subclasses. While class IIIa simple accusative transitive verbs are uniquely characterised by the prefix mi-, class IIIb simple ergative transitive verbs are marked by either ma- or -en. This contributes to the split ergativity of the language. We have analysed the -en forms to be passive verbs corresponding to the mi- active verbs in class IIIa, parcelling out the ma- forms to a separate domain belonging to ergative languages.

The relatedness between -en passive forms and their corresponding active forms can be stated by the following derivation rule:

DR-24

$$\begin{pmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ -\begin{pmatrix} +Nom \\ -AGT \end{pmatrix} \\ -\begin{pmatrix} +Acc \\ -PAT \end{pmatrix} \end{pmatrix} \quad >\!\!\rightarrow \quad \begin{pmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ -\begin{pmatrix} +Gen \\ -AGT \end{pmatrix} \\ -\begin{pmatrix} +Nom \\ -PAT \end{pmatrix} \\ +pssv \end{pmatrix} \quad pssv = \text{"passive"}$$

$$[mi- \rightarrow [$$
$$\quad] \rightarrow -en]$$

The CR's in the case frame are not reinterpreted as some other case relations even though their associations with case forms have been changed. The feature [+pssv] (passive) is neither a case feature nor a semantic feature, but it is needed for distinguishing between the "passive" forms corresponding to "active" verbs and those that are ergative to begin with.

Examples of active and passive verbs related by DR-24 are given in the following sets of sentences:

(6.24a) mi-taes cira to wawa nira
hit 3s *child* 3s
[+V, +trns, -ergv, -pssv] [Nom, +AGT] [Acc, +PAT]
he hits his child

(6.24b) taes-en nira kia waco
hit 3s *dog*
[+V, +trns, +ergv, +pssv] [Gen, +AGT] [Nom, +PAT]
the dog was hit by him
or, *he hit the dog*

(6.25a) mi-tenger kami to olad no rarapa
cook (until tender) lexcl *gristle* *of* *beef*
[+V, +trns, -ergv, -pssv] [Nom, +AGT] [Acc, +PAT]
we are stewing beef gristle

(6.25b) tenger-en a [mi-cacak]
cook (until tender) *cook (in water)*
[+V, +trns, +ergv, +pssv] [+V, -fint]

kia tamorak nia babahi
pumpkin *woman*
[Nom, +PAT] [Gen, +AGT]
the pumpkin is being cooked by the woman
or, *the woman is cooking the pumpkin*

(6.26a) mi-kilim cira to badal
look-for 3s *berry*
[+V, +trns, -ergv, -pssv] [Nom, +AGT] [Acc, +PAT]
he is looking for berries

(6.26b) kilim-en nira ko toper (nira)
looked-for 3s *hat* 3s
[+V, +trns, +ergv, +pssv] [Gen, +AGT] [Nom, +PAT]
his hat is sought by him
or, *he is looking for his hat*

It is to be noted that the passive derivation is not very productive in Amis. Not all mi- verbs have a corresponding passive form. If an English passive cannot find an Amis -en passive to translate into, it usually can find a ma- ergative form to serve the purpose. In any case, corresponding to a mi- verb, there is either an -en passive verb or an ergative verb marked by ma- in the lexicon. In some cases, as exemplified by the trio of melaw *look, see* verbs: mi-melaw *see*, ma-melaw *see by*, and melaw-en *watch, look after*, both -en and ma- forms are available. We can see from the gloss that melaw-en has undergone semantic shift. The language does not need two forms to carry the "passive" meaning.

Both the ma- verbs and the -en verbs are ergative and they share identical case frames. The devision to call the -en forms "passive" and derived while leaving the ma- category as basic (of course, it also includes a derived membership) is based on the consideration that the ma- forms have a richer derivational potential. The ma- verbs can be detransitivised by processes (g) and (h) and can be causativised by processes (d) or (e). The -en suffix, on the other hand, seems more peripheral as it participates in derivational processes that create verbs with implied instrument (see section 6.2.3) and imperative forms (see section 6.3.2.5 below).

Typologically speaking, passive verbs are accusative verbs. In the present analysis, passive verbs are marked [+ergv] because formally, in terms of case frame and case markings, they belong to the category of ergative verbs.

6.3.2.3 Ergativisation

In being a split ergative language, Amis operates with a mixed system of accusative and ergative constructions. It has been shown in section 6.3.2.2 that the accusative verbs in Amis have corresponding "active" and "passive" forms. Whereas the case frame and marking of the active forms are clearly accusative, the case frame and marking of the "passive" forms resemble that of the ergative verbs. The only difference between the two typologically different constructions is in the marking on the verb form. A "passive" verb is marked by -en while a true ergative verb is marked by ma-.

In the previous section, we have given examples for the passive derivation. In this section, we are going to show how, within a split ergative system, accusative verbs and ergative verbs are related. Assuming the mi- accusatives to be the source of derivation, we can term these processes "un-passive" derivations in contrast with the passive derivations which yield passive verbs. The output of an "un-passive" derivation in Amis is expected to be either an ergative verb (section 6.3.2.3) or an intransitive verb unmarked for ergativity (section 6.3.2.4).

Here we would be making a big claim about the proto-language and its development, if we take ergativisation literally as a historical event. As far as we can trace, Proto-Austronesian is in itself assumed to be a split ergative language (cf. Starosta, Pawley, and Reid, 1982) with co-existing but mutually independent accusative and ergative verbs. Since I am not ready to make the claim that, prior to Proto-Austronesian, accusative verbs developed into ergative verbs, the DR proposed here is to be regarded as nothing more than a word-forming analogy which may be operative for some speakers of the language. Forced by the fletched arrow notation, I am only making the

assumption that the word-forming analogy operates from the accusative to the ergative, if a direction must be ascertained. Besides, it is really difficult to tell in this case whether the assumed direction reflects a native speaker's association for the related forms. Since class IIIa mi- verbs occur more frequently as class II specific-object intransitives, it is the class IIIb ergative verbs, including the "passive" verbs and the true ergative verbs, which appear more frequently in the transitive verb category.

The following DR seemingly relates class IIIa accusative verbs to corresponding class IIIb ergative verbs:

DR-25

$$\begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ -\begin{pmatrix}+Nom\\-AGT\end{pmatrix} \\ -\begin{pmatrix}+Acc\\-PAT\end{pmatrix} \end{bmatrix} \quad >\!\!\rightarrow \quad \begin{bmatrix} +V \\ +[+PAT] \\ +[+AGT] \\ -\begin{pmatrix}+Gen\\-AGT\end{pmatrix} \\ -\begin{pmatrix}+Nom\\-PAT\end{pmatrix} \\ -pssv \end{bmatrix} \qquad pssv = \text{"passive"}$$

[mi- → [ma-

DR-25 looks very much like DR-24, but I am not convinced that ergative verbs are produced in one single step as represented by DR-25, if ergative verbs are indeed derived from the accusative. It is more likely that the accusative verbs in class IIIa first undergo detransitivisation, and then derive into class IIIb ergative verbs by a transitivisation process. The path can be schematised as follows:

IIIa >- - - - - - - - - - - - - - -> I >- - - - - - - - - - - - - -> IIIb

(detransitivisation) (h)

(transitivisation) (c)

In fact, this turns out to be the more natural way, as these processes can be used elsewhere to account for the relationships between the simple transitive and the simple intransitive verbs. Since I do not have a separate section for derivations that delete CR's, the detransitivisation process (h) will be presented in the next section together with the detransitivisation process (g).

6.3.2.4 Detransitivisation

In the previous section, detransitivisation is seen to provide a link between class IIIa and class IIIb. Detransitivisation is a process which deletes a CR.

In this section, DR-25 is reanalysed as DR-26 and DR-27, representing the two steps leading from class IIIa accusative verbs to class IIIb ergative verbs through a neutral territory which is class I.

DR-26

$$\begin{bmatrix} +V \\ +[\,+PAT\,] \\ +[\,+AGT\,] \\ \supset \begin{pmatrix} +AGT \\ \alpha F_i \end{pmatrix} \\ -\begin{pmatrix} +Nom \\ -AGT \end{pmatrix} \\ -\begin{pmatrix} +Acc \\ -PAT \end{pmatrix} \end{bmatrix} \rightarrowtail \begin{bmatrix} +V \\ +[\,+PAT\,] \\ -[\,+AGT\,] \\ \supset \begin{pmatrix} +PAT \\ \alpha F_i \end{pmatrix} \\ -\begin{pmatrix} +Nom \\ -PAT \end{pmatrix} \end{bmatrix}$$

DR-26 is a zero-derivation. The morphogical change into the characteristic ergative ma- prefix probably takes place during transitivisation, which can be described as follows:

DR-27

$$\begin{bmatrix} +V \\ +[\,+PAT\,] \\ -[\,+AGT\,] \\ \supset \begin{pmatrix} +PAT \\ \alpha F_i \end{pmatrix} \\ -\begin{pmatrix} +Nom \\ -PAT \end{pmatrix} \end{bmatrix} \rightarrowtail \begin{bmatrix} +V \\ +[\,+PAT\,] \\ +[\,+AGT\,] \\ \supset \begin{pmatrix} +AGT \\ \alpha F_i \end{pmatrix} \\ -\begin{pmatrix} +Nom \\ -PAT \end{pmatrix} \\ -\begin{pmatrix} +Gen \\ -AGT \end{pmatrix} \end{bmatrix}$$

[mi- → [ma-

The output of DR-27 are class IIIb ergative transitive verbs. DR-27 belongs to the class of derivations that add a CR, specifically an AGT, to the case frame of the source verb. According to Figure 6.1, it belongs to type (c). Actually, as the following correspondences show, the seemingly added AGT is from the original PAT through reinterpretation. It is a notional object that is added.

Nominative PAT	⇸	Genitive AGT
∅	⇸	Nominative PAT

The following set of examples show the relationships between class IIIa (or corresponding class II specific-object intransitive), class I, and class IIIb verbs.

(6.27a)

mi-liakaway$_1$	kako	tina	kawpir-an
pick	ls	*this*	*tender-leaves*
$\begin{pmatrix} +V \\ +trns \\ -ergv \end{pmatrix}$	$\begin{pmatrix} Nom \\ +AGT \end{pmatrix}$		$\begin{pmatrix} Lcv \\ +LOC \end{pmatrix}$

I pick the tender leaves

(6.27b)

mi-liakaway$_2$	kami	i	lotok
pick	lexcl		*hill*
$\begin{pmatrix} +V \\ -trns \end{pmatrix}$	$\begin{pmatrix} Nom \\ +PAT \end{pmatrix}$		$\begin{pmatrix} Lcv \\ +PLC \end{pmatrix}$

we pick (leaves) in the hills

(6.27c) ma-liakaway$_3$ toay niam kira kawoir
picked *already* lexcl *that* *tender-leaves*
$\begin{bmatrix}+V\\+trns\\+ergv\end{bmatrix}$ [+Adv] $\begin{bmatrix}Gen\\+AGT\end{bmatrix}$ $\begin{bmatrix}Nom\\+PAT\end{bmatrix}$
we have already picked the tender leaves
Lit. *the tender leaves already picked by us*

Having seen a detransitivisation process which deletes a CR, we are going to present a detransitivisation process which only reinterprets CR's. This is the process which takes a class IIIa verb and turns it into a corresponding specific-object intransitive verb. This process is what we have promised in Figure 6.1 as process (g). It is a very important process because, like DR-26, the detransitivisation process (g) which will be presented here provides a bridge between the accusative and the ergative systems of the language which do not mix. It was shown in section 6.3.1.1.2 under causativisation that this process accounts for the indirect link between class I and class II, and, more importantly, between class IIIa and class Vb. Since intransitive verbs are unmarked for ergativity. they provide a neutral ground where one system can cross over to the other.

Process (g) can be formulated in the following rule:

DR-28

$$\begin{bmatrix}+V\\+[+PAT]\\+[+AGT]\\-[+LOC]\\ \supset\begin{bmatrix}+AGT\\ \alpha F_i\end{bmatrix}\\ -\begin{bmatrix}+Nom\\-AGT\end{bmatrix}\\ \supset\begin{bmatrix}+PAT\\ \beta F_j\end{bmatrix}\\ -\begin{bmatrix}+Acc\\-PAT\end{bmatrix}\end{bmatrix} \gg \begin{bmatrix}+V\\+[+PAT]\\-[+AGT]\\+[+LOC]\\ \supset\begin{bmatrix}+PAT\\ \alpha F_i\end{bmatrix}\\ -\begin{bmatrix}+Nom\\-PAT\end{bmatrix}\\ \supset\begin{bmatrix}+LOC\\ \beta F_j\end{bmatrix}\\ -\begin{bmatrix}+Lcv\\-LOC\end{bmatrix}\end{bmatrix}$$

Process (g) or DR-28 can be illustrated by the following pairs of examples:

(6.28a) mi-kilim$_1$ cira to badal
look-for 3s *berry*
$\begin{bmatrix}+V\\+trns\\-ergv\end{bmatrix}$ $\begin{bmatrix}Nom\\+AGT\end{bmatrix}$ $\begin{bmatrix}Acc\\+PAT\end{bmatrix}$
he is looking for berries

(6.28b) mi-kilim$_2$ cira itisoan
look-for 3s 2s
$\begin{bmatrix}+V\\-trns\end{bmatrix}$ $\begin{bmatrix}Nom\\+PAT\end{bmatrix}$ $\begin{bmatrix}Lcv\\+LOC\end{bmatrix}$
he is looking for you

(6.29a) ma-olah$_1$ kako to badal
like, love 1s *berry*
[+V, +trns, -ergv] [Nom, +AGT] [Acc, +PAT]
I like berries

(6.29b) ma-olah$_2$ kako itisoan
like, love 1s 2s
[+V, -trns] [Nom, +PAT] [Lcv, +LOC]
I love you

(6.30a) ma-talaw$_1$ cira to kawas
afraid-of 3s *ghost*
[+V, +trns, -ergv] [Nom, +AGT] [Acc, +PAT]
he is afraid of ghosts

(6.30b) ma-talaw$_2$ kako itira tamdaw-an
afraid-of 1s *that* *man*
[+V, -trns] [Nom, +PAT] [Lcv, +LOC]
I am afraid of that man

When the output of DR-28 is used as the input for deriving class Vb ergative causative verbs, there is no need to change the feature of ergativity from [-ergv] to [+ergv] which the system does not seem to tolerate. Process (g) not only relates class IIIa to class II, but also joins the accusative domain to the ergative domain of the Amis language.

6.3.2.5 Imperative

Imperative verbs in Amis are treated as derived verbs because there is a change in case frame features and hence verbal subcategory in the process which relates the imperative and the non-imperative verb forms.

In section 5.2.5.1 above, we have seen accusative transitive locative verbs with nominative LOC in imperative expressions. Though there is no addition or deletion of CR's, the re-alignment of CF-CR mappings changes the picture in the extended case frame. Consider the following examples:

(5.81) pabeli kako iciraan(-an) to [cacay a codad]
give 1s 3s *one* *book*
[+V, +trns, -ergv] [Nom, +AGT] [Lcv, +LOC] [Acc, +PAT]
I gave one/a book to him

(6.31) pabeli-i henaca cira to codad (haw)?
give *please* 3s *book* QM
[+V, +trns, -ergv, +mprt] [Nom, +LOC] [Acc, +PAT]
would you please give him a/the book?

(5.84) pa-sebanaq-i kako tia ngangan nia tamdaw
let...know, tell ls *name* *of* *person*
[+V, +trns, -ergv, +mprt] [Nom, +LOC] [Acc, +PAT]

[ka-kilim-en iso]
looked-for 2s
[Gen, +AGT]

tell me the name of the person whom you are looking for

The correspondences between the source and the derived imperative verbs of class Va can be schematically represented as follows:

Nominative AGT >→ (Genitive AGT)
Locative LOC >→ Nominative LOC
Accusative PAT >→ Accusative PAT

and can be stated in the following derivation rule:

DR-29

[+V, +[+PAT], +[+AGT], +[+LOC], -[+Nom, -AGT]] >→ [+V, +[+PAT], -[+AGT], +[+LOC], -[+Nom, -LOC], +caus]

] → -i]

In conclusion, in this chapter we have demonstrated how some Amis verbal constructions are related to one another and how these inter-sentence relationships can be stated in derivation rules in the lexicase model. This is not meant to be an exhaustive study of verbal derivations in Amis though it is believed that, in presenting DR's that incorporate case notions (section 6.2), those that add a CR (section 6.3.1), and those that only reinterpret CR's or change their CF-CR correspondence (section 6.3.2), we have covered most of the important aspects of verbal derivational processes.

The issue of Patient centrality has been raised. It seems that the Amis data neither strongly support nor refute this hypothesis. In general, the language does not favour processes that involve CR-reinterpretation. Even with a complicated process like causativisation, for example, the language always stays within the same ergativity domain. In other words, derivations never change the feature of ergativity, even though it can be neutralised through detransitivisation processes. That is to say, the source of class Va causative verbs have to be accusative (class IIIa) and the source of class Vb causative verbs are either ergative (from class IIIb) or unmarked for ergativity (class II).

Since Amis is rich in its morphological forms of affixation, it is a very challenging and meaningful project to study the derivational relationships among the syntactic categories of the language. This work is but a modest beginning.

BIBLIOGRAPHY

ABE, Akiyoshi

1930 *Study of languages of native tribes.* (In Japanese.) Taipei: Bango Kenkyukai

ACSON, Veneeta

1979 A diachronic view of case-marking systems in Greek: a localistic-lexicase analysis. Dissertation: University of Hawaii.

AKMAJIAN, Adrian and Frank HENY

1975 *An introduction to the principles of transformational syntax.* Cambridge, Mass.: The MIT Press.

ANDERSON, John M.

1971 *The grammar of case: towards a localistic theory.* Cambridge: Cambridge University Press.

1977 *On case grammar: prolegomena to a theory of grammatical relations.* London: Humanities Press.

ARONOFF, Mark

1976 *Word formation in generative grammar. Linguistic Inquiry Monograph Series No. 1.* Cambridge, Mass.: The MIT Press.

ASAI, Erin

1936 *A study of the Yami language, an Indonesian language spoken on Botel Tobago Island.* Leiden: J. Ginsberg.

1953 *The Sedik language of Formosa.* Kanazawa, Japan: Cercle Linguistique de Kanazawa, Kanazawa University.

BENDIX, Edward Herman

1966 *Componential analysis of general vocabulary: the semantic structure of a set of verbs in English, Hindi, and Japanese.* Bloomington: Indiana University.

BENEDICT, Paul K.

1966 Austro-Thai. *Behavior Science Notes* 1/4:227-261. New Haven.

1967a Austro-Thai studies: 1. Material culture. *Behavior Science Notes* 2/3:203-244. New Haven.

1967b Austro-Thai studies: 3. Austro-Thai and Chinese. *Behavior Science Notes* 2/3:275-336. New Haven.

1975 *Austro-Thai: language and culture, with a glossary of roots.* New Haven: Human Relations Area Files, Inc.

1976 Formosan reflexes of PAN nasal/orals. In Liêm, ed. *South-East Asian linguistic studies, vol.2. PL,* C-42:

BENNETT, David C.

1974 *Spatial and temporal uses of English prepositions — an essay in stratificational semantics.* Longman Linguistic Series No. 17. London: Longman Group Limited.

BENTON, Richard A.

1971 *Pangasinan reference grammars.* Honolulu: University of Hawaii Press.

BLAKE, Barry J.

1977 *Case marking in Australian languages.* LS23. Canberra: Australian Institute of Aboriginal Studies.

BLOOMFIELD, Leonard

1917 *Tagalog texts with grammatical analysis.* Studies in Language and Literature 3/2-4. Urbana: University of Illinois.

BLUST, Robert A.

1970 Proto-Austronesian addenda. *Oceanic Linguistics* 9/2:104-162.

1972 Proto-Austronesian addenda with cognates in non-Oceanic Austronesian languages: a preliminary list. *University of Hawaii Working Papers in Linguistics* 4/8:1-43.

1974 Proto-Austronesian syntax: the first step. In *Papers of the First International Conference on Comparative Austronesian Linguistics, vol.2: (Proto-Austronesian and Western Austronesian). Oceanic Linguistics* 13:1-15.

1977 The Proto-Austronesian pronouns and Austronesian subgrouping: a preliminary report. *University of Hawaii Working Papers in Linguistics* 9/2:1-15.

BRUGMANN, Karl

1884 Zur Frage nach den Verwandtschaftsverhaltnissen der indogermanishchen Sprachen. *Internationale Zeitschrift fur allgemeine Sprachwissenschaft* 1.

CAPELL, Arthur

1964 Verbal systems in Philippine languages. *Philippine Journal of Science* 93:231-249.

1974 Subgroups in Western Austronesian. Paper presented at the First International Conference on Comparative Austronesian Linguistics, Honolulu, Hawaii, January 2-4.

CENA, Resty M.

1977 Tagalog counterexamples to the accessibility hierarchy. Leduc, Alberta, Canada. Mimeo.

1978 Patient primacy in Tagalog. An earlier version read at the Linguistic Society of America Winter Meeting, Chicago, Illinois, December 28-30, 1977.

CHAFE, Wallace L.

1970 *Meaning and the structure of language*. Chicago: The University of Chicago Press.

CHAI, Chen-kang

1967 *Taiwan aborigines — a genetic study of tribal variations*. Cambridge: Harvard University Press.

CHANG, Kwang-chih

1956 A brief survey of the archaeology of Formosa. *Southwestern Journal of Anthropology* 12/4:371-386.

1963 Introduction to special Taiwan section. *Asian Perspectives* 7/1-2:195-202.

1966 Preliminary notes on the excavations in Formosa, 1964-65. *Asian Perspectives* 9:140-149.

CHANG, Kwang-chih and Minze STUIVER

1966 Recent advances in the prehistoric archaeology of Formosa. *Proceedings of the U.S. National Academy of Sciences* 55/3:539-543.

CHEN, Chi-lu

1961 *Wood-carving of the Paiwan group of Taiwan*. (In Chinese.) Taipei, Taiwan: National Taiwan University.

1965 Age organization and men's house of the Formosan aborigines. *Bulletin of the Department of Archaeology and Anthropology* 25-26:93-111. Taipei, Taiwan: National Taiwan University.

1968 Material culture of the Formosan aborigines. Taipei, Taiwan: Taiwan Museum.

CHEN, Chi-lu and Michael D. COE

1954 An investigation of Ami religion. *Quarterly Journal of the Taiwan Museum* 7/3-4:249-262. Taipei.

CHEN, Teresa M.

1969 Amis texts. 75 pp. Department of Archaeology and Anthropology, National Taiwan University, Taipei. Mimeo.

CHICHIIWA, Suketaro

1960 *Houses of the Formosan mountain tribes*. (In Japanese.) Tokyo.

CHOMSKY, Noam

1965 *Aspects of the theory of syntax*. Cambridge: The MIT Press.

1970 Remarks on nominalization. In Roderick A. Jacobs and Peter S. Rosenbaum, eds, *Readings in English transformational grammar*, 184-221. Watham: Ginn.

CHRÉTIEN, C. Douglas

1951 Oceanic material in Bu-hwan, a hill dialict of Formosa. In Walter J. Fischel, ed. *Semitic and oriental studies, a volume presented to William Popper,* 65-77. Berkeley: University of California Press.

CHU, Yuan-teh

1975a Amis texts. 167 pp. Taipei. Mimeo.

1975b Amis structure. 96 pp. Taipei. Mimeo.

CLARK, Marybeth

1978 *Coverbs and case in Vietnamese*. *PL*, B-48.

CONSTANTINO, Ernesto

1965 The sentence patterns of twenty-six Philppone languages. *Lingua* 15:71-124.

1971 Tagalog and other major languages of the Philippines. In Sebeok, ed. 1971:112-154.

COOK, Walter A.

1971 Improvements in case grammar 1970. *Languages and Linguistics* 2:10-22. Washington, D.C.: Georgetown University Press.

DAHL, Otto Chr.

1976 *Proto-Austronesian*. Second revised edition. (Scandinavian Institute of Asian Studies Monograph Series 15.) Lund: Studentlitteratur; Curzon Press.

DEGUZMAN, Videa P.

1970 A syntactic comparison of Tagalog, Maori and Chamorro. *The Archive* 1/1:33-60. Quezon City: University of the Philippines.

1978 *Syntactic derivation of Tagalog verbs*. *Oceanic Linguistics* Special Publication No.16. Honolulu: The University Press of Hawaii. (University of Hawaii dissertation, 1976.)

DIXON, Robert M.W.

1979 Ergativity. *Language* 55/1:59-138.

DYEN, Isidore

1963 The position of the Malayo-polynesian languages of Formosa. *Asian Perspectives* 7/1-2:261-271.

1965a *A lexicostatistical classification of the Austronesian languages*. Indiana University Publications in Anthropology and Linguistics, Memoir 19. (Supplement to *International Journal of American Linguistics* 31/1.) Baltimore: The Waverly Press.

1965b Lexicostatictics in comparative linguistics. *Lingua* 13:230-239.

1965c Formosan evidence for some new Proto-Austronesian phonemes. *Lingua* 14:285-305.

1969 Reconstruction, the comparative method, and the proto-language uniformity assumption. *Language* 45:499-518.

1970 Maranao and Tagalic: a qualitative confirmation of a subgrouping hypothesis. *Philippine Journal of Linguistics* 1/1:1-11.

1971a The Austronesian languages and Proto-Austronesian. In Sebeok, ed. 1971:5-54.

1971b The Austronesian languages of Formosa. In Sebeok, ed. 1971:168-199.

EGEROD, Søren

1965 Verb inflection in Atayal. *Lingua* 15:251-282.

1966a Word order and word classes in Atayal. *Language* 42:346-369.

1966b A statement on Atayal phonology. In *Artibus Asiae Supplementum XXIII (Felicitation volume for the Seventy-fifth Birthday of Prof. G.H. Luce)* 1:120-130.

1971 The origin of headhunting — an Atayal text with vocabulary. *Bulletin of the Institute of History and Philology* 39:291-325.

FAGAN, Joel L.

1979 Preliminaries to a field study of Mono-Alu, Solomon Islands. Master's thesis: University of Hawaii.

FERRELL, Raleigh

1966 The Formosan tribes: a preliminary linguistic, archaeological and cultural synthesis. *Bulletin of the Institute of Ethnology* 21:97-127. Nankang, Taiwan: Academia Sinica.

1969 Taiwan aboriginal groups: problems in cultural and linguistic classification. Taipei: Institute of Ethnology, Academia Sinica.

1970 Paiwan stem vocabulary (draft). Mimeo.

1971 Ergative, passive or focus-marking? — elicitation of verb syntax in Indonesian languages. Colloque International du Centre National de la Recherche Scientifique: Methodes d'Enquète et de Description des Langues sans Tradition Ecrite. Nice, France, June 28-July 2.

1972 Verb systems in Formosan languages. In Jacques Barrau, Jacqueline M.D. Thomas and Lucien Bernot, eds, *Langues et techniques, nature et société*, vol.1, 121-128. Paris.

1979 Construction markers and subgrouping of Formosan languages. In Liem, ed. 1979 *(SEALS 3)*. *PL*, C-45:199-211.

1976 Phonological subgrouping of Formosan languages. In Naylor, ed. 1979:241-254.

FERRELL, Raleigh and Patricia STANLEY

1979 Austronesian vs. Intro-European: the case against case. In Naylor, ed. 1979:19-31.

FEY, Virginia

1962 Amis word list, central dialect (Chengkung). Taichung, Taiwan. Mimeo.

1964a Verbs-adjectives (Amis): aspects of action or attribution. Taichung, Taiwan. Mimeo.

1964b Valences in Amis: the vowels a i o are important focal point. Taichung, Taiwan. Mimeo.

FILLMORE, Charles J.

1966 Toward a modern theory of case. Project on Linguistic Analysis Report No.13. Columbus: Ohio State University.

1968a The case for case. In Emmon Bach and Robert T. Harms, eds, *Universals in linguistic theory,* 1-88. New York: Holt, Rinehart and Winston.

1968b Lexical entries for verbs. *Foundations of Language* 4:373-393.

1970 Types of lexical information. In Ferenc Kiefer, ed. *Studies in syntax and semantics,* 109-137. Dordrecht, Holland: D. Reidel Publishing Co. Also in Danny Steinberq and Leon Jacobovits, *Semantics: an interdisciplinary reader in philosophy, linguistics, anthropology, and psychology,* London: Cambridge University Press. Also in *Ohio State University Working Papers in Linguistics* 2:65-103.

1971 Some problems for case grammar. In Richard O'Brien, ed. *Linguistics and language study,* 35-56. Also in *Ohio State University Working Papers in Linguistics* 10:245-265.

1977 The case for case reopened. In Peter Cole and Jerrold M. Sadock, eds, *Grammatical relations (Syntax and semantics)* vol.8:59-82. New York: Academic Press.

FOLEY, William A.

1976 Comparative syntax in Austronesian. Ph.D. dissertation, Berkeley: University of California.

GONZALES, Andrew B., ed.

1973 *Parangal Kay Cecilio Lopez (Essays in honor of Cecilio Lopez on his 75th birthday), Philippine Journal of Linguistics Special Monograph No.4.* Quezon City: Linguistic Society of the Philippines.

GRACE, George W.

1953 *The position of the Polynesian languages within the Austronesian (Malayo-Polynesian) language family.* Indiana University Publications in Anthropology and Linguistics, Memoir 16. (Supplement to *International Journal of American Linguistics* 25/3.) Baltimore, MD: Waverly Press.

GRUBER, Jeffrey S.

1965 *Studies in lexical relations.* MIT dissertation. Bloomington: Indiana University Linguistics Club.

1967 Look and see. *Language* 43:937-947.

GUNTHER, Hartmut

1975 Valency, case forms, and case relations. *University of Edinburgh Work in Progress* 8:64-83.

HALLE, Morris

1973 Prolegomena to a theory of word formation. *Linguistic Inquiry* 4/1:3-16.

HALLIDAY, Michael A.K.

1967 Notes on transitivity and theme in English. *Journal of Linguistics* 3/1:37-81 and 4/3:179-215.

1970 Language structure and language function. In John Lyons, ed. *New horizons in linguistics*, 140-165. London: Penguin.

HARMON, Carol W.

1977 Kagayanen and the Manobo subgroup of Philippine languages. Ph.D. dissertation, University of Hawaii.

HARVEY, Mark David

1980 Subgroups in Austronesian. B.A. Honors subthesis, The Australian National University, Canberra. Updated version published 1982 in Amran Halim, Lois Carrington and S.A. Wurm, eds, Papers from the Third International Conference on Austronesian Linguistics, vol.2: 47-99. *PL*, C-75.

HAUDRICOURT, André-G.

1962 Comment on A. Capell, Oceanic linguistics today, *Current Anthropology* 3:410.

1965 Problems of Austronesian comparative philology. *Lingua* 14:315-329.

HIDALGO, Cesar A. and Araceli C. HIDALGO

1970 *The structure of Ivatan: phonological, lexical, and grammatical components*. Quezon City: University of the Philippines.

HOPPER, Paul J. and Sandra A. THOMPSON

1980 Transitivity in grammar and discourse. *Language* 56/2:251-299.

HUDDLESTON, Rodney

1970 Some remarks on case grammar. *Linguistic Inquiry* 1/4:501-510.

HUDSON, Richard A.

1976 *Arguments for a non-transformational grammar*. Chicago: University of Chicago Press.

IKRANAGARA, Kay

1980 *Melayu Betawi grammar*. Jakarta: NUSA. *(Linguistic studies in Indonesia and languages in Indonesia*, vol.9.) (University of Hawaii dissertation, 1975.)

INO, Yoshinori

1916 Characteristics of the languages of Formosan aborigines. (In Japanese.) *Jinruigaku Zasshi* (The Journal of the Anthropological Society of Tokyo) 31.

JACKENDOFF, Ray S.

1972 *Semantic interpretation in generative grammar.* Cambridge: The MIT Press.

JENG, Heng-hsiung

1977 *Topic and focus in Bunun.* Institute of History and Philology Special Publication No.72. Nankang, Taiwan: Academia Sinica.

JESPERSEN, Otto

1964 *Essentials of English grammar.* Alabama Linguistic and Philosophical Series No.1. University, Alabama: University of Alabama Press.

1975 *The philosophy of grammar.* London: George Allen and Unwin Ltd. (First published in 1924.)

KANO, Tadao

1946 *Studies in the ethnology and prehistory of Southeast Asia.* (In Japanese.) Vol.I. Tokyo.

1952 *Studies in the ethnology and prehistory of Southeast Asia.* (In Japanese.) Vol.II. Tokyo.

KANO, Tadao and Kokichi SEGAWA

1956 *An illustrated ethnography of Formosan aborigines.* Vol.1: *The Yami.* Tokyo, Japan: Maruzen.

KEENAN, Edward and Bernard COMRIE

1977 Noun phrase accessibility and universal grammar. *Linguistic Inquiry* 8:63-99.

KESS, Joseph F.

1967 Syntactic features of Tagalog verbs. Doctoral dissertation, University of Hawaii.

KULLAVANIJAYA, Pranee

1974 Transitive verbs in Thai. Doctoral dissertation, University of Hawaii.

KURODA, Shige-yuki

1965 Causative forms in Japanese, *Foundations of Language* 1/1:30-50.

LAKOFF, George

1970 *Irregularity in syntax.* New York: Holt, Rinehart and Winston.

LEE, Keedong

1974 Kusaiean verbal derivation rules. Doctoral dissertation, University of Hawaii.

LEECH, Geoffrey N.

1969 *Towards a semantic description of English.* London: Longman.

LI, Fang-kuei, CHEN Chi-lu and TANG Mei-chun

1958 Notes on Thao language. (In Chinese with English summary.) *Occasional Papers of the Department of Archaeology and Anthropology, National Taiwan University,* No.1: *Ethnological researches among the Thao of Sun-Moon Lake, Formosa,* 137-166. Taipei, Taiwan: National Taiwan University.

LI, Paul Jen-kuei

1972 On comparative Tsou. *Bulletin of the Institute of History and Philology* 44/2:311-337.

1973 *Rukai structure.* Institute of History and Philology Special Publication No.64. Nankang, Taiwan: Academia Sinica.

1975a *Rukai texts.* Institute of History and Philology Special Publication No.64/2. Nankang, Taiwan: Academia Sinica.

1975b Saisiyat structure and texts. An annual report presented to the National Science Council, Taipei. Mimeo.

1975c Thao texts. 83 pp. Taipei. Mimeo.

1975d Research materials and problems of Formosan languages. (In Chinese with Bibliography including works in Chinese, Japanese and Western languages.) *Bulletin of the Institute of Ethnology* 40:51-84. Nankang, Taiwan: Academia Sinica.

1976 Pazeh texts. 30 pp. Taipei. Mimeo.

1978a Kavalan texts. 60 pp. Taipei. Mimeo.

1978b The case-marking systems of the four less-known Formosan languages. In S.A. Wurm and Lois Carrington, eds, *Second International Conference on Austronesian Linguistics: proceedings. PL,* C-61: 569-615.

1982 Atayalic final voiced stops. In Amran Halim, Lois Carrington and S.A. Wurm, eds, *Papers from the Third International Conference on Austronesian Linguistics,* vol.2:171-185. *PL,* C-75.

LIU, Pin-hsiung, C.C. CHIU, L. SHIH and C.C. CHEN

1965 *Social structure of the Hsiukulan Amis.* (In Chinese.) (Institute of Ethnology Monograph No.8.) Nankang, Taiwan: Academia Sinica.

LYONS, John

1968 *Introduction to theoretical linguistics.* London: Cambridge University Press.

MABUCHI, Toichi

1953 Retrospect on the classification of the Formosan aborigines. (In Japanese.) *Minzokugaku Kenkyu* (The Japanese Journal of Ethnology.) 18/1-2:1-11.

1954a Migration and distribution of the Formosan aborigines. Part 1. (In Japanese.) *Minzokugaku Kenkyo* (The Japanese Journal of Ethnology.) 18/1-2:123-154.

1954b Migration and distribution of the Formosan aborigines. Part 2. (In Japanese.) *Minzokugaku Kenkyo* (The Japanese Journal of Ethnology.) 18/4.

1960 The aboriginal peoples of Formosa. In George P. Murdock, ed. *Social structure in Southeast Asia*, (Viking Fund Publications in Anthropology, No.29), 127-140.

1966 Sphere of geographical knowledge and socio-political organization among the mountain peoples of Formosa. Monumenta Nipponica Monographs 25:101-146. Tokyo.

MANLEY, Timothy

1972 *Outline of Sre structure. Oceanic Linguistics* Special Publication No.12. Honolulu: The University Press of Hawaii.

MATTHEWS, P.H.

1974 *Morphology: an introduction to the theory of word-structure.* London: Cambridge University Press.

McCAWLEY, James

1968 Lexical insertion in a transformational grammar without deep structure. *Papers presented at the Fourth Regional Meeting, Chicago Linguistic Society,* 71-80.

McGINN, Richard

1970 Tagalog words and verbs: a probe into the nature of derivational processes. Term Paper for LInguistics 651, University of Hawaii.

McKAUGHAN, Howard P.

1958 *The inflection and syntax of Maranao verbs.* Manila: Bureau of Printing.

1962 Overt relation markers in Maranao. *Language* 38/1:47-51.

1970 Topicalization in Maranao — an addendum. In Wurm and Laycock, eds, *(PLSCapell). PL*, C-13:291-300.

1973 Subject versus topic. In Gonzales, ed. 1973:206-213.

MINTZ, Malcolm

1973 Case and semantic affixes of Bikol verbs. Dissertation, University of Hawaii.

MIRIKITANI, Leatrice T.

1972 *Kapampangan syntax. Oceanic Linguistics* Special Publication No.10. Honolulu: The University Press of Hawaii.

MONTGOMERY, Robert L.

1962 Amis text (Taiwan). *Work Papers of the Summer Institute of Linguistics, University of North Dakota* 6:17-20.

NAYLOR, Paz Buenaventura, ed.

1979 *Austronesian studies: papers from the Second Eastern Conference on Austronesian Linguistics,* Ann Arbor: University of Michigan.

NIKIGAWA, A.

1953 A classification of the Formosan languages. *Journal of Austronesian Studies* 1/1:145-151.

NILSON, Don L.F.

1973 *The instrumental case in English — syntactic and semantic considerations.* The Hague: Mouton.

O'BRIEN, Richard

1971 *Linguistics: developments of the sixties — viewpoints for the seventies.* (Monograph Series on Language and Linguistics No.24.) Washington, D.C.: Georgetown University Press.

OGAWA, Naoyoshi and Erin ASAI

1935 *Myths and traditions of the Formosan native tribes.* (In Japanese.) Taihoku (Taipei), Taiwan: Linguistics Department, Taihoku Imperial University.

PAWLEY, Andrew

1966 Polynesian languages: a subgrouping based on shared innovations in morphology. *Journal of the Polynesian Society* 75/1:39-64.

1967 The relationship of Polynesian Outlier languages. *Journal of the Polynesian Society* 76/3:259-296.

1970 Grammatical reconstruction and change in Polynesia and Fiji. In Wurm and Laycock, eds, *(PLSCapell). PL,* C-13:301-367.

1972 On the internal relationships of Eastern Oceanic languages. In R.C. Green and M. Kelly, eds, *Studies in Oceanic culture history,* vol.3, (Pacific Anthropological Records No.13), 1-142. Honolulu, Hawaii: Bernice Pauahi Bishop Museum. (Paper presented at Wenner-Gren Symposium on Oceanic Culture History, Sigatoka, Fiji, August 1969.)

PAWLEY, Andrew and Lawrence A. REID

1976 The evolution of transitive constructions in Austronesian. *University of Hawaii Working Papers in Linguistics* 8/2:51-74.

PAWLEY, Andrew, Lawrence A. REID and Stanley STAROSTA

1978 The evolution of Philippine focus: out of the *fry-an PAN and into *i-fry. Paper presented at the Annual Meeting of the Linguistic Society of America held at the University of Illinois, July, 1978.

PLATT, John T.

1971 *Grammatical form and grammatical meaning: a tagmemic view of Fillmore's deep structure case concepts.* (North-Holland Linguistic Series 5.) Amsterdam: North-Holland.

PLEINES, Jochen

1976 *Handlung, Kausalität, Intention: Probleme der beschreibung semantischer Relationen.* Tübingen: Gunter Narr.

RAMOS, Teresita V.

1974 *The case system of Tagalog verbs. PL,* B-27.

RAMOS, Teresita V. and Resty M. CENA

1979 Existential, locative and possessive in Tagalog. Paper presented at the Summer Meeting of the Linguistic Society of America held at Salzburg, Austria, August 2-4.

REID, Lawrence A.

1966 *An Ivatan syntax. (Oceanic Linguistics* Special Publication No.2.) Honolulu: The University Press of Hawaii.

1974a The Igorot subgroup of Philippine languages. Paper presented at the First International Conference on Comparative Austronesian Linguistics, Hawaii.

1974b The Central Cordilleran subgroup of Philippine languages. *Oceanic Linguistics* 13:1-2:511-560.

1978 Problems in the reconstruction of Proto-Philippine construction markers. In S.A. Wurm and Lois Carrington, eds, *Second International Conference on Austronesian Linguistics: proceedings. PL,* C-61:33-66

1979 Evidence for Proto-Philippine nominative marking. *Philippine Journal of LInguistics* 10:1-20.

1980 PAN genitive alternation: the Philippine evidence. Paper presented at the Linguistic Society of Hawaii, Diachronic Syntax Festival, April 10. *University of Hawaii Working Papers in Linguistics* 11/2:45-53.

ROBINS, R.H.

1974 The case theory of Maximus Planudes. In Luigi Heilmann, ed. *Proceedings of the XI International Contress of Linguists,* 107-111. Bologna: Il Mulino.

SCHACHTER, Paul and Fe T. OTANES

1972 *Tagalog reference grammar.* Los Angeles: University of California Press.

SEBEOK, Thomas A., ed.

1971 *Current trends in linguistics,* vol.8. *Linguistics in Oceania.* The Hague: Mouton.

SPRENGER, Arnold

1971 The numerals of the Puyuma language (Katipol Dialect). *Fu Jen Studies* 4:49-60. Taipei.

1972 Overt construction markers in Puyuma (Formosa). In Charles T.C. Tang, Jeffrey C.H. Tung and Anthony Y.T. Wu, eds, *Papers in linguistics in honor of A.A. Hill,* 133-145. Taipei: Rainbow-Bridge Book Co.

STANLEY, Patricia

1974 Syntax of Tsou verbs: implications for comparative studies. Paper presented at the First International Conference on Comparative Austronesian Linguistics, Honolulu, January 2-4.

1976 Object incorporation in Tsou. In Naylor, ed. 1979:311-314.

STAROSTA, Stanley

1967 Tsou focus. Paper read at the 42nd Annual Meeting of the Linguistic Society of America, December 28. Mimeo.

1969 Review of Tung T'ung-ho, et al.: a descriptive study of the Tsou language, Formosa. *Language* 45/2:439-444.

1971a Review of John Lyons, Introduction to theoretical linguistics. *Language* 47/2:429-447.

1971b Derivation and case in Sora verbs. *Indian Linguistics,* 32/3: 194-206. (Also appeared in *University of Hawaii Working Papers in Linguistics* 3/7:89-110.)

1971c Lexical derivation in a case grammar. *University of Hawaii Working Papers in Linguistics* 3/8:83-101.

1971d Linguistics and Anti-Science. *Philippine Journal of Linguistics* 2/1:13-27.

1973 The faces of case. *Language Sciences* 25:1-14. (Appeared in French as "Les visages du cas", *Langages* 38:104-128, 1975; also in *University of Hawaii Working Papers in Linguistics* 4/1:71-121, 1972.)

1974 Causative verbs in Formosan languages. *Oceanic Linguistics* 13/1-2:279-369. (Also appeared in *University of Hawaii Working Papers in Linguistics* 5/9:89-155, 1973.)

1975a Case in the lexicon. In Luigi Heilmann, ed. *Proceedings of the Eleventh International Congress of Linguists,* II, 805-813. Bologna: Società editrice il Mulino.

1975b Generative syntax: a case approach. Department of Linguistics, University of Hawaii. Mimeo.

1976a A place for case. *Language Learning* 26/1:1-36. (Also appeared in *University of Edinburgh Work in Progress* 7:18-34, 1974.)

1976b Lexicase II: lexicon. Department of Linguistics, University of Hawaii. Mimeo.

1976c Case forms and case relations in Sora. In Philip N. Jenner, Lawrence C. Thompson and Stanley Starosta eds, *Austroasiatic studies, (Oceanic Linguistics* Special Publication No.13), Part II, 1069-1108. Honolulu: The University Press of Hawaii. (Also appeared in *University of Hawaii Working Papers in Linguistics* 5/1:133-153, 1973.)

1978 The one per sent solution. In Werner Abraham, ed. *Valence, semantic case, and grammatical relations,* 459-576. Studies in Language Companion Series 1. Amsterdam: John Benjamins. (Appeared in German as "Die 1-Pro-Sent Losung", in Jochen Pleines, ed. *Beitrage zum Stand der Kasustheorie*. Tübingen: Gunter Narr.)

1979a The end of phrase structure as we know it. *University of Hawaii Working Papers in Linguistics* 11/1:59-76.

1979b Lexicase I: science and syntax. Institut fur deutsche Sprache, Mannheim. Mimeo.

1982a Lexical decomposition: features or atomic predicates? *Linguistic Analysis* 9/4:379-393; revised from Is lexical decomposition a lot of rot?, *University of Hawaii Working Papers in Linguistics* 12/2:61-75, 1980. (Extracted from Starosta 1976b.)

1982b Affix hobbling. *L.A.U.T.*, Series A, Paper No.95. Trier: University of Trier. Reprinted from *University of Hawaii Working Papers in Linguistics* 9/1:62-158, 1977.

1982c Case relations, perspective, and patient centrality. *University of Hawaii Working Papers in Linguistics* 14/1.

1982d Lexicase: an attempt at a generative reformation. *Kiswahili* 49/2: 62-79.

to appear a The derivation of combining forms and normal pseudo-compounds in Sora. In Jan-Olof Svantesson, ed. *Proceedings of the Symposium on Austro-Asiatic Languages*. Lund: Scandinavian Institute of Asian Studies.

to appear b Sora noun inflection. To appear in Gérard Diffloth, Bijoy P. Mahapatra and David L. Stampe, eds, *Proceedings of the Second International Congress on Austroasiatic Linguistics.* Mysore: Central Institute of Indian Languages.

STAROSTA, Stanley, Andrew PAWLEY and Lawrence A. REID

1978 The evolution of Philippine focus: out of the *fry-an PAN and into *i-fry. Paper presented at the Annual Meeting of the Linguistic Society of America held at the University of Illinois, July, 1978.

1982 The evolution of focus in Austronesian. In Amran Halim, Lois Carrington and S.A. Wurm, eds, *Papers from the Third International Conference on Austronesian Linguistics,* vol.2: *Tracking the travellers. PL*, C-75.

STEVENS, Alan

1969 Case grammar in Philippine linguistics. Paper read at the Annual Meeting of the Linguistic Society of America held at San Francisco, December 27-29.

1973 Case relations of pa-causatives. Abstract. First International Conference on Comparative Austronesian Linguistics, Honolulu, January 2-4.

STOCKWELL, Robert, Paul SCHACHTER and Barbara Hall PARTEE

1973 *The major syntactic structures of English.* New York: Holt, Rinehart and Winston.

SUNG, Margaret M. Yan

1966 Phonetic and phonemic system of the Kanakanavu language, Formosa. *Bulletin of the Institute of History and Philology* 36/2:783-800.

1969 *Word structure of the Kanakanavu language.* Ithaca: Cornell University master's thesis.

SUNG, Wen-hsun

1967 The megalithic culture of Taiwan's east coast. (In Chinese.) *Newsletter of Chinese Ethnology* 7:20-21. Taipei.

TAYLOR, Harvey

1971 *Case in Japanese.* South Orange, New Jersey: Seton Hall University Press.

TCHEKHOFF, Claude

1974 On the inapplicability of the active-passive dichotomy in certain Austronesian languages. Paper presented at the First International Conference on Comparative Austronesian Linguistics, Honolulu, January 2-4.

THOMPSON, Lawrence

1965 *A Vietnamese grammar.* Seattle: University of Washington Press.

TORJESEN, Edvard P.

1964a Amis articulatory and acoustic patternings: with special reference to the /d/ phoneme. Taichung, Taiwan. Mimeo.

1964b Amis stress patterns. Taichung, Taiwan. Mimeo.

1964c Phonemic problems in Amis. Taichung, Taiwan. Mimeo.

1964d Amis word list. Taichung, Taiwan. Mimeo.

1964e Outline headings of Amis morphology. Taichung, Taiwan. Mimeo.

TSUCHIDA, Shigeru

1964 Preliminary reports on Saisiyat: phonology. *Gengo Kenkyu* (Journal of the Linguistic Society of Japan.) 46:42-52.

1968a Bibliography of Formosan languages. 35 pp. Mimeo.

1968b Linguistic questionnaire for Philippine languages. Tokyo. Mimeo.

1971 List of words of Formosan languages. 40 pp. Mimeo.

1976 *Reconstruction of Proto-Tsouic phonology.* Study of Languages and Cultures of Asia and Africa, Monograph Series No.5. Tokyo, Japan: Tokyo Gaikokugo Daigaku. (Yale University dissertation, 1975.)

TUNG, T'ung-ho

1964 *A descriptive study of the Tsou language, Formosa.* (Institute of History and Philology Special Publication No.48.) Nankang, Taiwan: Academia Sinica.

Utrecht Manuscripts

Vocabularuim Formosanum. Utrecht University Library. Unpublished manuscripts.

UTSUSHIKAWA, Nenozo, Nobuto MIYAMOTO and Toichi MABUCHI

1935 *The Formosan native tribes: a genealogical and classificatory study.* (In Japanese.) Taihoku (Taipei), Taiwan.

VOEGELIN, Carl F. and Florence M. VOEGELIN

1964 *Languages of the world: Indo-Pacific Fascicle One. Anthropological Linguistics* 6/6.

1965 *Languages of the World: Indo-Pacific Fascicle Four. Anthropological Linguistics* 7/2.

WALTON, Charles

1979 A Philippine language tree. *Anthropological Linguistics* 21/2:70-98.

WANG, Samuel H.

1975 Fatahan phonology: a preliminary approach. Term paper presented to Prof. Shuan-fu Lin, National Taiwan Normal University, 29pp.

1976 The syllable structure of Fataan Amis. Master's thesis, National Taiwan Normal University, Taipei.

WANG, Sung-hsing

1961 Religion and myth among the Vataan Ami. (In Chinese.) *Bulletin of the Institute of Ethnology* 12:107-178. Nankang, Taiwan: Academia Sinica.

WEI, Hwei-lin

1958 Lineage systems among the Formosan tribes. (In Chinese.) *Bulletin of the Institute of Ethnology* 5:1-44. Nankang, Taiwan: Academia Sinica.

1965 Tribal organization and authority system of the Formosan aboriginal societies. (In Chinese.) *Bulletin of the Department of Archaeology and Anthropology* 25-26.71-92. Taipei, Taiwan: National Taiwan University.

WEI, Hwei-lin and Jen-ying WANG

1966 A survey of population growth and migration patterns among Formosan aborigines. (In Chinese with English summary.) *Occasional Papers of the Department of Archaeology and Anthropology* No.3. Taipei, Taiwan: National Taiwan University.

WOLFF, John U. and Ida WOLFF

1970 The classification of Cebuano verbs. *Philippine Journal of Linguistics* 1/1:74-91.

1972 Review of Llamzon: a subgrouping of nine Philippine languages. *Journal of the American Oriental Society* 92/2:368-370.

1973 Verbal inflection in Proto-Austronesian. In Gonzales, ed. 1973: 71-91.

WU, Peter A.

1969 A descriptive analysis of Bunun language. Master's thesis, Georgetown University, Washington.

WURM, S.A. and D.C. LAYCOCK, eds

1970 *Pacific linguistic studies in honour of Arthur Capell*. *PL*, C-13. *(PLSCapell)*.

YAMADA, Yukihiro and Ying-chu LIAO

1974 A phonology of Tayal. *Research Reports of Kochi University*. 23/6:1-9.

YUAN, Chang-rue

1969 *The Makutaai Ami of eastern Taiwan — an ethnographic report*. (Institute of Ethnography Monograph No.18.) Nankang, Taiwan: Academia Sinica.

ZORC, R. David

1968 Information sheet and linguistic check list for Philippine languages. Kalibo, Aklan. Mimeo.

1973 The western subgroup of Bisayan. *Oceanic Linguistics* 11/2:110-139.

1974a Towards a definitive Philippine wordlist — the qualitative use of vocabulary in identifying and classifying languages. *Oceanic Linguistics* 13/1-2:409-456.

1974b Internal and external relationships of the Mangyan languages. *Oceanic Linguistics* 13/1-2:561-600.

1977 *The Bisayan dialects of the Philippines: subgrouping and reconstruction*. *PL*, C-44.

AUTHOR INDEX

LANGUAGE INDEX

TOPIC INDEX

PACIFIC LINGUISTICS - LIST OF PUBLICATIONS

After each entry, ISBN numbers have been added. Where there is more than one number, the first refers to the complete set of volumes and the second and/or subsequent numbers to individual volumes or parts.

Note: the earliest works were called LINGUISTIC CIRCLE OF CANBERRA PUBLICATIONS, however all now bear the name PACIFIC LINGUISTICS.

All volumes are softbound unless otherwise indicated.

Unmarked publications which come under 'Languages for intercultural communication in the Pacific area' project are: A-54, A-57, B-26, B-61, B-73, C-34, C-40, C-52, D-3, D-5, D-12, D-23, D-29 (note the change of project name).

SERIES A - OCCASIONAL PAPERS

No. 1. WURM, S.A. Some remarks on the role of language in the assimilation of Australian aborigines. 1963; 12pp. Reprinted 1966. ISBN 0 85883 006 X

No. 2. HEALEY, Alan Handling unsophisticated linguistic informants. 1964; iii+30pp. Reprinted 1967, 1972, 1973, 1975. ISBN 0 85883 007 8

No. 3. Papers in New Guinea linguistics No.1. 1964; iv+42pp. Reprinted 1971. ISBN 0 85883 008 6
Papers by Alan Pence; Ellis Deibler Jr; Phyllis M. Healey; Bruce A. Hooley.

No. 4. Papers in New Guinea linguistics No.2. 1964; iv+41pp. (incl. 1 map). Reprinted 1971. ISBN 0 85883 009 4
Two papers by S.A. Wurm.

No. 5. Papers in New Guinea linguistics No.3. 1965; iv+53pp. Reprinted 1972. ISBN 0 85883 010 8
Two papers by Phyllis M. Healey.

No. 6. Papers in New Guinea linguistics No.4. 1965; iv+68pp. Reprinted 1971. ISBN 0 85883 011 6
Two papers by Darlene Bee.

No. 7. Papers in New Guinea linguistics No.5. 1966; viii+93pp. Reprinted 1971. ISBN 0 85883 012 4
Papers by Chester I. and Marjorie E. Frantz; Des and Jennifer Oatridge; Richard E. Loving; Joyce Swick; Alan Pence; Philip Staalsen; Helen and Maurice Boxwell.

No. 8. Papers in Philippine linguistics No.1. 1966; iv+38pp. Reprinted 1971. ISBN 0 85883 013 2
Papers by Jo Shetler; Richard Pittman; Vivian Forsberg; Jean Hussey.

No. 9. Papers in South East Asian linguistics No.1. 1967; iii+43pp. + 30 charts, 24 tables. Reprinted 1970. ISBN 0 85883 014 0
Papers by Nguyễn Đăng Liêm (2); A. Tran Huong Mai; David W. Dellinger.

No.10. Papers in Australian linguistics No.1. 1967; v+59pp. Reprinted 1972. ISBN 0 85883 015 9
Papers by David and Kathleen Glasgow; Jean F. Kirton; W.J. Oates; B.A. and E.G. Sommer.

No.11. Papers in Australian linguistics No.2. 1967; iii+73pp. + 7 maps. Reprinted 1971. ISBN 0 85883 016 7
Papers by C.G. von Brandenstein; A. Capell (2); Kenneth Hale.

No.12. Papers in New Guinea linguistics No.6. 1967; iii+48pp. Reprinted 1971. ISBN 0 85883 017 5
Papers by K.A. McElhanon; G.L. Renck.

No.13. Papers in New Guinea linguistics No.7. 1967; iv+59pp. Reprinted 1971. ISBN 0 85883 018 3
Papers by Jean Goddard; Karl J. Franklin.

Series A - Occasional Papers (continued)

No.14. Papers in Australian linguistics No.3. 1968; iii+46pp. + 1 map.
Reprinted 1971. ISBN 0 85883 019 1
Papers by E.F. Aguas; D.T. Tryon.

No.15. Papers in linguistics of Melanesia No.1. 1968; iii+52pp. + 1 map.
Reprinted 1971, 1980. ISBN 0 85883 020 5
Papers by A. Capell; G.J. Parker; A.J. Schütz (2).

No.16. Papers in New Guinea linguistics No.8. 1968; iv+62pp. (incl. 2 maps).
Reprinted 1971. ISBN 0 85883 021 3
Papers by C.L. Voorhoeve; Karl J. Franklin; Graham Scott.

No.17. Papers in Australian linguistics No.4. 1969; viii+97pp. (incl. 3 maps).
Reprinted 1971. ISBN 0 85883 022 1
Papers by Joy Kinslow Harris; S.A. Wurm; Don Laycock.

No.18. Papers in New Guinea linguistics No.9. 1969; vi+110pp. (incl. 1 map).
Reprinted 1971. ISBN 0 85883 023 X
Papers by A. Capell; Alan Healey; Darryl Wilson (3).

No.19. Papers in Philippine linguistics No.2. 1969; iii+32pp. Reprinted 1971.
ISBN 0 85883 024 8
Papers by Jeanne Miller; Helen W. Miller.

No.20. Papers in Borneo linguistics No.1. 1969; iv+41pp. Reprinted 1971.
ISBN 0 85883 025 6
Papers by D.J. Prentice (3).

No.21. Papers in linguistics of Melanesia No.2. 1969; v+105pp. (incl. 5 maps).
Reprinted 1979. ISBN 0 85883 002 7
Papers by A. Capell; Ann Chowning; S.A. Wurm.

No.22. Papers in New Guinea linguistics No.10. 1969; v+84pp. ISBN 0 85883 026 4
Papers by Don Laycock; Richard G. Lloyd; Philip Staalsen.

No.23. Papers in New Guinea linguistics No.11. 1970; v+78pp. (incl. 1 map).
ISBN 0 85883 001 9
Papers by Gordon and Ruth Bunn; Alan Pence, Elaine Geary and Doris Bjorkman; Harry and Natalia Weimer; O.R. Claassen and K.A. McElhanon.

No.24. Papers in Philippine linguistics No.3. 1970; vi+77pp.
ISBN 0 85883 000 0
Papers by Norman Abrams; Jannette Forster; Robert Brichoux.

No.25. Papers in New Guinea linguistics No.12. 1970; iv+60pp. + 1 map.
ISBN 0 85883 027 2
Papers by C.L. Voorhoeve; K.A. McElhanon; Bruce L. and Ruth Blowers.

No.26. Papers in New Guinea linguistics No.13. 1970; iv+48pp. ISBN 0 85883 028 0
Papers by Bruce L. Blowers; Margie Griffin; K.A. McElhanon.

No.27. Papers in Australian linguistics No.5. 1971; iv+70pp. ISBN 0 85883 029 9
Two papers by Jean F. Kirton.

No.28. Papers in New Guinea linguistics No.14. 1971; vi+172pp. (incl. 8 maps).
ISBN 0 85883 030 2
Papers by T.E. Dutton; C.L. Voorhoeve; S.A. Wurm.

No.29. Papers in South East Asian linguistics No.2. 1971; iv+78pp. (incl. 1 map).
ISBN 0 85883 031 0
Papers by Warren W. Glover; Maria Hari; E.R. Hope.

No.30. Papers in South East Asian linguistics No.3. 1973; iv+82pp.
ISBN 0 85883 091 4
Papers by D.W. Dellinger; E.R. Hope; Makio Katsura; Tatsuo Nishida.

No.31. Papers in New Guinea linguistics No.15. 1972; v+69pp. ISBN 0 85883 032 9
Papers by R.K. Lewis; Sandra C. Lewis; Shirley Litteral; Philip Staalsen.

No.32. Papers in Philippine linguistics No.4. 1971; iv+32pp. ISBN 0 85883 033 7
Papers by R.M. Hohulin; Lou Hohulin.

Series A - Occasional Papers (continued)

No.33. Papers in Borneo and Western Austronesian linguistics No.2. 1977; vi+132pp. + 1 map. ISBN 0 85883 164 3
Papers by C. Court; Robert A. Blust; F.S. Watuseke.

No.34. Papers in New Guinea linguistics No.16. 1972; iii+46pp. ISBN 0 85883 081 7
Papers by Janice Allen; Marshall Lawrence.

No.35. Papers in linguistics of Melanesia No.3. 1972; vii+113pp. (incl. 6 maps) + 6 maps. ISBN 0 85883 083 3
Papers by C.H. Beaumont; D.T. Tryon; S.A. Wurm.

No.36. Papers in Australian linguistics No.6. 1973; iv+72pp. + 4pp. photographs, 2 maps. ISBN 0 85883 095 7
Papers by B. Schebeck; Luise A. Hercus and Isobel M. White.

No.37. Papers in Australian linguistics No.7. 1974; iv+73pp. (incl. 1 map, 3 photographs). ISBN 0 85883 116 3
Papers by Christine E. Furby; Luise A. Hercus; Christine Kilham.

No.38. Papers in New Guinea linguistics No.17. 1973; iii+78pp.
ISBN 0 85883 097 3
Papers by K.G. Holzknecht (3); Donald J. Phillips.

No.39. Papers in Australian linguistics No.8. 1975; v+78pp. ISBN 0 85883 126 0
Papers by M.C. Sharpe; Lothar Jagst; David B.W. Birk.

No.40. Papers in New Guinea linguistics No.18. 1975; iv+102pp. (incl. 5 maps).
ISBN 0 85883 118 X
Papers by Robert Conrad and Wayne Dye; N.P. Thomson; Leslie P. Bruce Jr.

No.41. Papers in Philippine linguistics No.5. 1974; iv+74pp. ISBN 0 85883 114 7
Papers by Donna Hettick Chandler; Edward Ruch; Jeannette Witucki.

No.42. Papers in Australian linguistics No.9. 1976; iv+79pp. ISBN 0 85883 140 6
Papers by Joyce Hudson; Barbara J. Sayers.

No.43. Papers in Philippine linguistics No.6. 1974; iii+74pp. (incl. 1 map).
ISBN 0 85883 108 2
Papers by Thomas N. Headland and Alan Healey; Jeannette Witucki.

No.44. Papers in Philippine linguistics No.7. 1975; iv+60pp. ISBN 0 85883 135 X
Papers by Betty Hooker; Dietlinde Behrens; Patricia M. Hartung.

No.45. Papers in New Guinea linguistics No.19. 1976; v+105pp. (incl. 2 maps).
ISBN 0 85883 156 2
Papers by Ger P. Reesink; Lillian Fleischmann and Sinikka Turpeinen; Peter C. Lincoln.

No.46. Papers in Philippine linguistics No.8. 1976; iv+89pp. ISBN 0 85883 146 5
Papers by Jeannette Witucki; Michael R. Walrod; Jean Shand.

No.47. Papers in Australian linguistics No.10. 1976; iv+78pp. (incl. 3 maps, 11 photographs). ISBN 0 85883 153 8
Papers by Jean F. Kirton; Bruce A. Sommer; S.A. Wurm and L. Hercus; P. Austin, R. Ellis and L. Hercus.

No.48. THOMAS, David, Ernest W. LEE and NGUYỄN ĐĂNG LIÊM, eds
Papers in South East Asian linguistics No.4: Chamic studies. 1977; ix+124pp. ISBN 0 85883 163 5
Papers by Alice Tegenfeldt Mundhenk and Hella Goschnick; Timothy Friberg and Kvoeu Hor; Doris Walker Blood; David L. Blood; Eugene Fuller; Ernest W. Lee; Hella Goschnick.

No.49. Papers in South-East Asian linguistics No.5. 1977; iv+98pp.
ISBN 0 85883 158 9
Three papers by David Bradley.

Series A - Occasional Papers (continued)

No.50 Papers in Philippine linguistics No.9. 1979; v+108pp. (incl. 1 map). ISBN 0 85883 186 4
Papers by E. Clay Johnston; Hartmut Wiens; Jo Ann Gault with Sulaiman and Fatima Barhama; Peter Green; Bruce Grayden; Jeannette Witucki.

No.51. Papers in Australian linguistics No.11. 1978; vii+199pp. (incl. 1 map) + 3 maps, 4 photographs. ISBN 0 85883 179 1
Papers by Jean F. Kirton; R. Wood; L.A. Hercus; Chester S. Street and Harry Palada Kulampurut; Dianne Buchanan; Jean F. Kirton and Bella Charlie.

No.52. GETHING, T.W. and NGUYỄN ĐĂNG LIÊM, eds Papers in South-East Asian linguistics No.6: Tai studies in honour of William J. Gedney. 1979; vi+149pp. ISBN 0 85883 188 0
Papers by Pongsri Lekawatana; Leslie M. Beebe; Thomas W. Gething; Carol J. Compton; Mary Sarawit; Thomas Scovel; John F. Hartmann; Wilaiwan Khanittanan; James R. Chamberlain; Beatrice T. Oshika.

No.53. Papers in South-East Asian linguistics No.7. 1980; v+130pp. (incl. 4 maps) ISBN 0 85883 206 2
Papers by Ronald L. Trail with Harisingh T. Rathod, Geeta Chand, Chaudhary Roy, Indira Shrestna, Nirmal Man Tuladhar; Peter J. Grainger; Warren W. Glover and John K. Landon; Austin Hale and Thakurlal Manandhar; Austin Hale; Burkhard Schöttelndreyer (3).

No.54. Papers in pidgin and creole linguistics No.1. 1978; vi+197pp. Reprinted 1980. ISBN 0 85883 178 3
Papers by Loreto Todd and Peter Mühlhäusler; S.A. Wurm (2); John T. Platt; Peter Mühlhäusler (2); D.S. Walsh.

No.55. Papers in Philippine linguistics No.10. 1979; vi+142pp. ISBN 0 85883 193 7
Papers by Andrew F. Gallman; E. Joe Allison; Carol M. Harmon; Jeannette Witucki.

No.56. Papers in New Guinea linguistics No.20. 1980; v+214pp. (incl. 4 maps). ISBN 0 85883 215 1
Papers by Maurice Boxwell; Jean Goddard; Malcolm Ross; Arden G. Sanders and Joy Sanders (2); Joy Sanders and Arden G. Sanders; H.J. Davies.

No.57. Papers in pidgin and creole linguistics No.2. 1979; x+290pp. Reprinted 1985. ISBN 0 85883 198 8
Papers by Peter Mühlhäusler; Elsa Lattey; Ellen Woolford; William G. Camden; Margaret S. Steffensen; M.G. Clyne; William Peet Jr; Ulrike Mosel; Ian Smith; Jerry G. Gebhard; Nguyễn Đăng Liêm; Gail Raimi Dreyfuss and Djoehana Oka; Maria Isabelita O. Riego de Dios.

No.58. Papers in Australian linguistics No.12. 1980; vi+113pp. ISBN 0 85883 208 9
Papers by Chester S. Street (2); Helen Geytenbeek; Kathleen Glasgow and Mark Garner.

No.59. RIGSBY, B. and P. SUTTON, eds Papers in Australian linguistics No.13: Contributions to Australian linguistics. 1980; viii+314pp. (incl. 5 maps). ISBN 0 85883 205 4
Papers by Alan Rumsey; Patrick McConvell; Peter Sutton (2); Tamsin Donaldson; L. Hercus; Peter Austin, Corinne Williams and Stephen Wurm; Paul Black; Terry Crowley; Harold J. Koch; D.T. Tryon; A.K. Chase and J.R. von Sturmer.

No.60. Papers in Australian linguistics No.14. 1980; v+178pp. (incl. 33 maps). ISBN 0 85883 230 5
Papers by Bruce E. Waters (2); Peter A. Busby.

No.61. Papers in New Guinea linguistics No.21. 1981; v+209pp. (incl. 10 maps). ISBN 0 85883 236 4
Papers by H.J. Davies; Dieter Osmers; John Lynch; S.A. Wurm.

Series A - Occasional Papers (continued)

No.62. BRADLEY, David, ed. Papers in South-East Asian linguistics No.8: Tonation. 1982; viii+159pp. (incl. 1 map). ISBN 0 85883 256 9
Papers by A.V. Diller; David Bradley; Philip John Rose; Vũ Thanh Phương; U Thein Tun; Jack and Mary Jane Gandour.

No.63. Papers in New Guinea linguistics No.22. 1985; iii+373pp. (incl 5 maps). ISBN 0 85883 322 0
Papers by Karen Adams and Linda Lauck; J. Miedema and F.I. Welling; W.A.L. Stokhof and Don A.L. Flassy; Hiroko Oguru (2); Kenneth Collier and Kenneth Gregerson; Thomas R. Phinnemore; David Scorza; John Davies and Bernard Comrie; Stan Abbott (2).

No.64. LYNCH, John, ed. Papers in linguistics of Melanesia No.4. 1982; vi+167pp. (incl. 2 maps). ISBN 0 85883 276 3
Papers by John Lynch (2); Daniel D. Dodenhoff.

No.65. Papers in pidgin and creole linguistics No.3. 1983; v+206pp. (incl. 2 maps, 2 photographs). ISBN 0 85883 305 0
Papers by Lois Carrington; Jeff Siegel; Peter Mühlhäusler (3); Linda Simons; Alan Baxter; Joyce Hudson; Alan Rumsey; Ann Chowning.

No.66. AUSTIN, Peter, ed. Papers in Australian linguistics No.15: Australian Aboriginal lexicography. 1983; xii+173pp. (incl. 3 maps). ISBN 0 85883 291 7
Papers by Peter Austin; Patrick McConvell, Ron Day and Paul Black; R. David Zorc; Bernhard Schebeck; G.R. McKay; Kenneth Hale; Mary Laughren and David Nash; Anna Wierzbicka; Mary Laughren; H. Koch.

No.67. BRADLEY, David, ed. Papers in South-East Asian linguistics No.9: Language policy, language planning and sociolinguistics in South-East Asia. 1985; vi+214pp. (incl. 1 map, 5 photographs). ISBN 0 85883 325 5
Papers by Anthea Fraser Gupta; John T. Platt; Ng Bee Chin; Asmah Haji Omar; A.V.N. Diller; Prapart Brudhiprabha; David Bradley; Thel Thong; Nguyen Dinh-Hoa; Anna J. Allott; R.K. Barz and A.V.N. Diller; Yogendra Yadav.

No.68. Papers in Australian linguistics No.16. 1984; v+327pp. (incl. 2 maps). ISBN 0 85883 311 5
Papers by Kathleen Glasgow; A. Capell; G.R. McKay (2); Rod Kennedy; D. Trefry.

No.69. Papers in New Guinea linguistics No.23. 1984; vi+283pp. (incl. 4 maps). ISBN 0 85883 313 1
Papers by Malcolm Ross; Jeff Siegel; Robert Blust; Michael A. Colburn; W. Seiler.

No.70. Papers in pidgin and creole linguistics No.24. 1986; iv+312pp. (incl. 4 maps). ISBN 0 85883 350 6
Papers by D.C. Laycock; Walter Seiler; Les Bruce; M.A. Chlenov; R. Daniel Shaw; Susanne Holzknecht; Graham Scott; Otto Nekitel; S.A. Wurm; L.R. Goldman; J.S. Fingleton.

No.72. Papers in pidgin and creole linguistics No.4. 1985; iv+238pp. (incl. 3 maps). ISBN 0 85883 337 9
Papers by Susanne Romaine; Peter Mühlhäusler; Linda Simons; Christine Jourdan; Roger M. Keesing; Doug Munro; Walter Seiler; Anna Shnukal; Margaret C. Sharpe; John R. Sandefur; Philip Baker and R. Ramnah.

Series A - Occasional Papers (continued)

No.74. Papers in New Guinea linguistics No.25. 1986; iv+261pp. (incl. 10 maps).
ISBN 0 85883 338 7
Papers by Linda K. Jones; Larry B. Jones; Francesca Merlan and Alan Rumsey; Martha Reimer; David L. Martin; Deidre Shelden; Hiroko Oguri.

IN PREPARATION

Papers in Philippine linguistics No.11.

Papers in New Guinea linguistics No.26.

Papers in Australian linguistics No.17.

Papers in Western Austronesian linguistics No.3.

Papers in Western Austronesian linguistics No.4.

Papers in South-East Asian linguistics No.10.

SERIES B - MONOGRAPHS

No. 1. WURM, S.A. and J.B. HARRIS Police Motu: an introduction to the trade language of Papua (New Guinea) for anthropologists and other fieldworkers. 1963; vi+81pp. Reprinted 1964, 1965, 1966, 1967, 1969, 1970, 1971, 1973. ISBN 0 85883 034 5

No. 2. WURM S.A. Phonological diversification in Australian New Guinea highlands languages. 1964; iii+87pp. + 1 map. Reprinted 1971. ISBN 0 85883 035 3

No. 3. HEALEY, Alan Telefol phonology. 1964; ii+53pp. + 2 figures, 5 tables. Reprinted 1972, 1981. ISBN 0 85883 036 1

No. 4. HEALEY, Phyllis M. Telefol noun phrases. 1965; iii+51pp. Reprinted 1972. ISBN 0 85883 037 X

No. 5. HEALEY, Phyllis M. Levels and chaining in Telefol sentences. 1966; iv+64pp. Reprinted 1971. ISBN 0 85883 038 8

No. 6. TRYON, Darrell T. Nengone grammar. 1967; x+91pp. Reprinted 1971. ISBN 0 85883 039 6

No. 7. TRYON, D.T. Dehu grammar. 1968; xi+111pp. Reprinted 1971. ISBN 0 85883 040 X

No. 8. TRYON, Darrell T. Iai grammar. 1968; xii+125pp. Reprinted 1971. ISBN 0 85883 041 8

No. 9. DUTTON, T.E. The peopling of Central Papua: some preliminary observations. 1969; viii+182pp. Reprinted 1970, 1971. ISBN 0 85883 042 6

No.10. FRANKLIN, K.J. The dialects of Kewa. 1968; iv+72pp. (incl. 20 maps). Reprinted 1971. ISBN 0 85883 043 4

No.11. SOMMER, B.A. Kunjen phonology: synchronic and diachronic. 1969; iv+72pp. (incl. 3 maps). ISBN 0 85883 044 2

No.12. KLOKEID, Terry J. Thargari phonology and morphology. 1969; viii+56pp. (incl. 1 map). Reprinted 1981. ISBN 0 85883 045 0

No.13. TREFRY, D. A comparative study of Kuman and Pawaian. 1969; v+94pp. (incl. 1 map). Reprinted 1980. ISBN 0 85883 046 9

No.14. McELHANON, K.A. Selepet phonology. 1970; v+47pp. (incl. 1 map). ISBN 0 85883 003 5

No.15. TRYON, D.T. An introduction to Maranungku (Northern Australia). 1970; x+111pp. (incl. 1 map). ISBN 0 85883 047 7

No.16. McELHANON, K.A. and C.L. VOORHOEVE The Trans-New Guinea Phylum: explorations in deep-level genetic relationships. 1970; v+107pp. (incl. 4 maps). Reprinted 1978. ISBN 0 85883 048 5

No.17. KUKI, Hiroshi Tuamotuan phonology. 1970; ix+119pp. + 2 maps. ISBN 0 85883 049 3

No.18. YOUNG, R.A. The verb in Bena-bena: its form and function. 1971; v+68pp. ISBN 0 85883 050 7

No.19. PATON, W.F. Ambrym (Lonwolwol) grammar. 1971; xi+128pp. (incl. 1 map). ISBN 0 85883 051 5

No.20. CAPELL, A. Arosi grammar. 1971; iv+90pp. (incl. 1 map). ISBN 0 85883 052 3

No.21. McELHANON, K.A. Selepet grammar. Part I: From root to phrase. 1972; vi+116pp. ISBN 0 85883 085 X and 0 85883 086 8

No.22. McELHANON, K.A. Towards a typology of the Finisterre-Huon languages, New Guinea. 1973. vii+73pp. (incl. 1 map). ISBN 0 85883 094 9

No.23. SCOTT, Graham Higher levels of Fore grammar. Edited by Robert E. Longacre. 1973; x+88pp. ISBN 0 85883 088 4

Series B - Monographs (continued)

No.24. DUTTON, T.E. A checklist of languages and present-day villages of central and south-east mainland Papua. 1973; iv+80pp. (incl. 1 map). ISBN 0 85883 090 6

No.25. LAYCOCK, D.C. Sepik languages - checklist and preliminary classification. 1973; iv+130pp. (incl. 1 map). ISBN 0 85883 084 1

No.26. MÜHLHÄUSLER, P. Pidginization and simplification of language. 1974; v+161pp. Reprinted 1978, 1981. ISBN 0 85883 113 9

No.27. RAMOS, Teresita V. The case system of Tagalog verbs. 1974; viii+168pp. ISBN 0 85883 115 5

No.28. WEST, Dorothy Wojokeso sentence, paragraph, and discourse analysis. Edited by Robert E. Longacre. 1973; x+181pp. ISBN 0 85883 089 2

No.29. ELBERT, Samuel H. Puluwat grammar. 1974; v+137pp. ISBN 0 85883 103 1

No.30. METCALFE, C.D. Bardi verb morphology (northwestern Australia). 1975; x+215pp. (incl. 1 map). ISBN 0 85883 121 X

No.31. VOORHOEVE, C.L. Languages of Irian Jaya: checklist. Preliminary classification, language maps, wordlists. 1975; iv+129pp. (incl. 17 maps). Reprinted 1980. ISBN 0 85883 128 7

No.32. WALTON, Janice Binongan Itneg sentences. 1975; vi+70pp. ISBN 0 85883 117 1

No.33. GUY, J.B.M. A grammar of the northern dialect of Sakao. 1974; ix+99pp. (incl. 2 maps). ISBN 0 85883 104 X

No.34. HOPE, Edward Reginald The deep syntax of Lisu sentences: a transformational case grammar. 1974; viii+184pp. (incl. 1 map). ISBN 0 85883 110 4

No.35. IRWIN, Barry Salt-Yui grammar. 1974; iv+151pp. ISBN 0 85883 111 2

No.36. PHILLIPS, Donald J. Wahgi phonology and morphology. 1976; x+165pp. ISBN 0 85883 141 4

No.37. NGUYEN ĐANG LIEM Cases, clauses and sentences in Vietnamese. 1975; v+89pp. ISBN 0 85883 133 3

No.38. SNEDDON, J.N. Tondano phonology and grammar. 1975; viii+264pp. ISBN 0 85883 125 2

No.39. LANG, Adrianne The semantics of classificatory verbs in Enga (and other Papua New Guinea languages). 1975; xii+234pp. (incl. 2 maps). ISBN 0 85883 123 6

No.40. RENCK, G.L. A grammar of Yagaria. 1975; xiii+235pp. (incl. 1 map). ISBN 0 85883 130 9

No.41. Z'GRAGGEN, John A. The languages of the Madang District, Papua New Guinea. 1975; vi+154pp. (incl. 1 map). Reprinted 1979. ISBN 0 85883 134 1

No.42. FURBY, E.S. and C.E. FURBY A preliminary analysis of Garawa phrases and clauses. 1977; viii+101pp. ISBN 0 85883 151 1

No.43. STOKHOF, W.A.L. Preliminary notes on the Alor and Pantar languages (East Indonesia). 1975; vi+73pp. (incl. 2 maps). Reprinted 1979. ISBN 0 85883 124 4

No.44. SAYERS, Barbara J. The sentence in Wik-Munkan: a description of propositional relationships. 1976; xvii+185pp. ISBN 0 85883 138 4

No.45. BIRK, D.B.W. The MalakMalak language, Daly River (Western Arnhem Land). 1976; xii+179pp. (incl. 1 map). ISBN 0 85883 150 3

No.46. GLISSMEYER, Gloria A tagmemic analysis of Hawaii English clauses. 1976; viii+149pp. ISBN 0 85883 142 2

Series B - Monographs (continued)

No.47. SCOTT, Graham The Fore language of Papua New Guinea. 1978; xv+210pp. (incl. 2 maps). ISBN 0 85883 173 2

No.48. CLARK, Marybeth Coverbs and case in Vietnamese. 1978; xi+215pp. ISBN 0 85883 162 7

No.49. FILBECK, David T'in: a historical study. 1978; vi+111pp. (incl. 2 maps). ISBN 0 85883 172 4

No.50. SMITH, Kenneth D. Sedang grammar; phonological and syntactic structure. 1979; xix+191pp. (incl. 3 maps). ISBN 0 85883 180 5

No.51. WELLS, Margaret A. Siroi grammar. 1979; vii+218pp. ISBN 0 85883 181 3

No.52. KILHAM, Christine A. Thematic organization of Wik-Munkan discourse. 1977; xix+280pp. (incl. 1 map). ISBN 0 85883 168 6

No.53. VESALAINEN, Olavi and Marja VESALAINEN Clause patterns in Lhomi. 1980; vii+100pp. ISBN 0 85883 210 0

No.54. SNEDDON, J.N. Proto-Minahasan: phonology, morphology and wordlist. 1978; x+204pp. (incl. 1 map). ISBN 0 85883 169 4

No.55. LYNCH, John A grammar of Lenakel. 1978; vii+135pp. (incl. 1 map). ISBN 0 85883 166 X

No.56. ROSS, Malcolm with John Natu PAOL A Waskia grammar sketch and vocabulary. 1978; v+119pp. ISBN 0 85883 174 0

No.57. BLAKE, Barry J. A Kalkatungu grammar. 1979; xii+198pp. (incl. 1 map). ISBN 0 85883 197 X

No.58. BEAUMONT, Clive H. The Tigak language of New Ireland. 1979; xi+163pp. (incl. 2 maps). ISBN 0 85883 187 2

No.59. STOKHOF, W.A.L. Woisika II: phonemics. 1979; xi+188pp. (incl. diagrams, photographs, 3 maps). Reprinted 1981. ISBN 0 85883 190 2

No.60. FOX, G.J. Big Nambas grammar. 1979; xii+139pp. (incl. 2 maps). ISBN 0 85883 183 X

No.61. HAWKINS, Emily A. Hawaiian sentence structures. 1979; iii+111pp. ISBN 0 85883 195 3

No.62. HEATH, Jeffrey Basic materials in Ritharngu: grammar, texts and dictionary. 1980; ix+249pp. (incl. 1 map). ISBN 0 85883 204 6

No.63. LUZARES, Casilda Edrial The morphology of selected Cebuano verbs: a case analysis. 1979; xii+208pp. ISBN 0 85883 199 6

No.64. VOORHOEVE, C.L. The Asmat languages of Irian Jaya. 1980; x+177pp. (incl. 5 maps). ISBN 0 85883 207 0

No.65. McDONALD, M. and S.A. WURM Basic materials in Waŋkumara (Gaḷali): grammar, sentences and vocabulary. 1979; ix+111pp. (incl. 2 maps). ISBN 0 85883 202 X

No.66. WOOLFORD, Ellen B. Aspects of Tok Pisin grammar. 1979; v+118pp. ISBN 0 85883 203 8

No.67. HERCUS, L.A. The Bāgandji language. 1982; xviii+329pp. (incl. 6 maps, 10 photographs). ISBN 0 85883 263 1

No.68. DAVIES, H.J. Kobon phonology. 1980; v+80pp. (incl. 3 maps). ISBN 0 85883 211 9

No.69. SOBERANO, Rosa The dialects of Marinduque Tagalog. 1980; xii+232pp. (incl. 42 maps). ISBN 0 85883 216 X

No.70. JOHNSTON, Raymond Leslie Nakanai of New Britain: the grammar of an Oceanic language. 1980; xiii+310pp. (incl. 2 maps). ISBN 0 85883 209 7

No.71. CHAN YAP, Gloria Hokkien Chinese borrowings in Tagalog. 1980; viii+155pp. ISBN 0 85883 225 9

No.72. HEATH, Jeffrey Basic materials in Warndarang: grammar, texts and dictionary. 1980; xii+174pp. (incl. 1 map). ISBN 0 85883 219 4

Series B - Monographs (continued)

No.73. MOSEL, Ulrike Tolai and Tok Pisin: the influence of the substratum on the development of New Guinea Pidgin. 1980; viii+146pp. ISBN 0 85883 229 1

No.74. WILLIAMS, Corinne J. A grammar of Yuwaalaraay. 1980; viii+200pp. (incl. 1 map). ISBN 0 85883 221 6

No.75. GUY, J.B.M. Experimental glottochronology: basic methods and results. 1980; vii+217pp. ISBN 0 85883 220 8

No.76. PERCIVAL, W.K. A grammar of the urbanised Toba-Batak of Medan. 1981; vi+125pp. ISBN 0 85883 237 2

No.77. HERCUS, L.A. Victorian languages: a late survey. 1986; xxix+303pp. (incl. 6 maps, 19 photographs). ISBN 0 85883 322 0

No.78. TSUNODA, Tasaku The Djaru language of Kimberley, Western Australia. 1981; xxi+290pp. (incl. 3 maps, 5 photographs). Reprinted 1987. ISBN 0 85883 252 6

No.79. GUY, J.B.M. Glottochronology without cognate recognition. 1981; viii+134pp. ISBN 0 85883 235 6

No.80. DURANTI, Alessandro The Samoan fono: a sociolinguistic study. 1981; xi+195pp. (incl. 3 maps, 5 photographs). ISBN 0 85883 248 8

No.81. TCHEKHOFF, Claude Simple sentences in Tongan. 1981; iv+95pp. ISBN 0 85883 251 8

No.82. TIPTON, Ruth A. Nembi procedural and narrative discourse. 1982; v+87pp. ISBN 0 85883 259 3

No.83. THURSTON, William R. A comparative study in Anêm and Lusi. 1982; ix+107pp. (incl. 3 maps). ISBN 0 85883 260 7

No.84. CAUGHLEY, Ross Charles The syntax and morphology of the verb in Chepang. 1982; xvi+269pp. (incl. 3 maps). ISBN 0 85883 278 X

No.85. WILSON, William H. Proto-Polynesian possessive marking. 1982; xv+137pp. ISBN 0 85883 270 4

No.86. RUMSEY, Alan An intra-sentence grammar of Ungarinjin, north-western Australia. 1982; xii+179pp. (incl. 1 map) ISBN 0 85883 272 0

No.87. CROWLEY, Terry The Paamese language of Vanuatu. 1982; xii+268pp. (incl. 3 maps). ISBN 0 85883 279 8

No.88. KEESING, Roger M. Kwaio grammar. 1985; vii+299pp. ISBN 0 85883 327 1

No.89. MERLAN, Francesca Ngalakan grammar, texts and vocabulary. 1983; xi+220pp. (incl. 1 map). ISBN 0 85883 282 8

No.90. HARTMANN, John F. Linguistic and memory structures in Tai-Lue oral narratives. 1984; ix+230pp. (incl. 8 maps). ISBN 0 85883 296 8

No.91. SNEDDON, J.N. Proto-Sangiric and the Sangiric languages. 1984; viii+138pp. (incl. 2 maps). ISBN 0 85883 306 9

No.92. MOSEL, Ulrike Tolai syntax and its historical development. 1984; iv+223pp. ISBN 0 85883 309 3

No.93. SEILER, Walter. Imonda, a Papuan language. 1985; v+236pp. (incl. 1 map). ISBN 0 85883 326 3

Series B - Monographs (continued)

No.96. FAGAN, Joel L. A grammatical analysis of Mono-Alu (Bougainville Straits, Solomon Islands). 1986; vii+158pp. (incl. 1 map). ISBN 0 85883 339 5

IN PREPARATION:

AUSTIN, Peter, Luise A. HERCUS, and Stephen A. WURM Basic materials in Malyangaba: grammar, sentences and vocabulary.

FELDMAN, Harry A grammar of Awtuw.

HURLBUT, Hope M. Verb morphology in Eastern Kadazan.

NOTE: For further monographs on Indonesian languages see under Series D - the subseries Materials in languages of Indonesia.

SERIES C - BOOKS

No. 1. LAYCOCK, D.C. The Ndu language family (Sepik District, New Guinea). 1965; xi+224pp. (incl. 1 map). ISBN 0 85883 053 1

No. 2. GRACE, George W. Canala dictionary (New Caledonia). 1975; ix+128pp. ISBN 0 85883 122 8

No. 3. NGUYỄN ĐĂNG LIÊM English grammar: a combined tagmemic and transformational approach. (A contrastive analysis of English and Vietnamese, vol.1.). 1966; xliv+177pp. Reprinted 1970. ISBN 0 85883 054 X and ISBN 0 85883 055 8

No. 4. NGUYỄN ĐĂNG LIÊM Vietnamese grammar: a combined tagmemic and transformational approach. (A contrastive analysis of English and Vietnamese, vol.2.). 1969; xlvi+209pp. Reprinted 1975. ISBN 0 85883 054 and ISBN 0 85883 056 6

No. 5. NGUYỄN ĐĂNG LIÊM A contrastive grammatical analysis of English and Vietnamese. (A contrastive analysis of English and Vietnamese, vol.3.). 1967; xv+151pp. Reprinted 1971. ISBN 0 85883 054 X and ISBN 0 85883 057 4

No. 6. TRYON, Darrell T. Dehu-English dictionary. 1967; v+137pp. Reprinted 1971. ISBN 0 85883 058 2

No. 7. TRYON, Darrell T. English-Dehu dictionary. 1967; iii+162pp. Reprinted 1971. ISBN 0 85883 059 0

No. 8. NGUYỄN ĐĂNG LIÊM A contrastive phonological analysis of English and Vietnamese. (A contrastive analysis of English and Vietnamese, vol.4.). 1970; xv+206pp. ISBN 0 85883 054 X and ISBN 0 85883 004 3

No. 9. TRYON, D.T. and M.-J. DUBOIS Nengone dictionary. Part I: Nengone-English. 1969; vii+445pp. (out of print) ISBN 0 85883 060 4 and ISBN 0 85883 061 2

No.10. OATES, W. and L. OATES Kapau pedagogical grammar. 1968; v+178pp. Reprinted 1971. ISBN 0 85883 062 0

No.11. FOX, C.E. Arosi-English dictionary. 1970; iv+406pp. (incl. 1 map). ISBN 0 85883 063 9

No.12. GRACE, George W. Grand Couli dictionary (New Caledonia). 1976; vii+113pp. ISBN 0 85883 154 6

No.13. WURM, S.A. and D.C. LAYCOCK, eds Pacific linguistic studies in honour of Arthur Capell. 1970; xi+1292pp. (Hardbound: incl. 25 maps, 1 photograph). Reprinted 1974, 1975, 1978, 1979. ISBN 0 85883 005 1
Articles by Byron W. Bender, Catherine H. Berndt, Ronald M. Berndt, H. Bluhme, J.E. Bolt, C.G. von Brandenstein, C. Douglas Chrétien, J.R. Cleverly, Christopher Court, R.M.W. Dixon, Wilfrid H. Douglas, T.E. Dutton, Isidore Dyen, Samuel H. Elbert, A.P. Elkin, E.H. Flint, Karl J. Franklin, Marie Godfrey, George W. Grace, Kenneth Hale, Joy Harris, Alan Healey, Henry Hershberger, Ruth Hershberger, W.G. Hoddinott, Patrick W. Hohepa, Nils M. Holmer, B.A. Hooley, Dorothy J. James, Hans Kähler, Susan Kaldor, Harland Kerr, Jean F. Kirton, D.C. Laycock, K.A. McElhanon, Howard McKaughan, Nguyễn Đăng Liêm, Geoffrey N. O'Grady, Andrew Pawley, Eunice V. Pike, Richard Pittman, D.J. Prentice, Albert J. Schütz, M.C. Sharpe, W.E. Smythe, A.J. Taylor, D.T. Tryon, E.M. Uhlenbeck, C.F. Voegelin, F.M. Voegelin, C.L. Voorhoeve, S.A. Wurm, John A. Z'graggen.

No.14. GEERTS, P. 'Āre'āre dictionary. 1970; iv+187pp. (incl. 2 maps) ISBN 0 85883 064 7

No.15. McELHANON, K.A. and N.A. McELHANON Selepet-English dictionary. 1970; xxi+144pp. ISBN 0 85883 065 5

No.16. FRANKLIN, K.J. A grammar of Kewa, New Guinea. 1971; ix+138pp. ISBN 0 85883 066 3

No.17. PARKER, G.J. Southeast Ambrym dictionary. 1971; xiii+60pp. ISBN 0 85883 067 1

Series C - Books (Continued)

No.18. PRENTICE, D.J. The Murut languages of Sabah. 1971; xi+311pp. (incl. 1 map). ISBN 0 85883 068 X

No.19. Z'GRAGGEN, J.A. Classificatory and typological studies in languages of the Madang District. 1971; viii+179pp. (incl. 4 maps). ISBN 0 85883 069 8

No.20. LANG, Adrianne Enga dictionary, with English index. 1973; lxi+219pp. (Hardbound: incl. 1 map). Reprinted 1978. ISBN 0 85883 093 0

No.21. PATON, W.F. Ambrym (Lonwolwol) dictionary. 1973; ix+337pp. (Hardbound) + 1 map. ISBN 0 85883 092 2

No.22. LONGACRE, Robert E., ed. Philippine discourse and paragraph studies in memory of Betty McLachlin. 1971; xv+366pp. (incl. 1 photograph). ISBN 0 85883 070 1
Articles by Barbara Blackburn, R.E. Longacre, Betty McLachlin, Charles Walton, Claudia Whittle, Hazel J. Wrigglesworth.

No.23. TRYON, D.T. and M.-J. DUBOIS Nengone dictionary. Part II: English-Nengone. 1971; iii+202pp. ISBN 0 85883 060 4 and ISBN 0 85883 071 X

No.24. ELBERT, Samuel H. Puluwat dictionary. 1972; ix+401pp. (Hardbound). ISBN 0 85883 082 5

No.25. FOX, Charles E. Lau dictionary, with English index. 1974; vi+260pp. (Hardbound). Reprinted 1976, 1978. ISBN 0 85883 101 5

No.26. FRANKLIN, Karl, ed. The linguistic situation in the Gulf District and adjacent areas, Papua New Guinea. 1973; x+597pp. (Hardbound: incl. 8 maps). Reprinted 1975. ISBN 0 85883 100 7
Articles by H.A. Brown, T.E. Dutton, Karl J. Franklin, Richard G. Lloyd, George E. MacDonald, Karen Shaw, R. Daniel Shaw, Clemens L. Voorhoeve, S.A. Wurm.

No.27. SOHN, Ho-min and B.W. BENDER A Ulithian grammar. 1973; xv+398pp. (Hardbound: incl. 2 maps). Reprinted 1980. ISBN 0 85883 098 1

No.28. HEADLAND, Thomas N. and Janet D. HEADLAND A Dumagat (Casiguran)-English dictionary. 1974; lxiii+232pp. (Hardbound: incl. 1 map). ISBN 0 85883 107 4

No.29. DUTTON, T.E., ed. Studies in languages of Central and South-East Papua. 1975; xvii+834pp. (Hardbound: incl. 5 maps). Reprinted 1978. ISBN 0 85883 119 8
Articles by John Austing, Russell E. Cooper, T.E. Dutton, Cynthia Farr, James Farr, Roger Garland, Susan Garland, J.E. Henderson, J.A. Kolia, Mike Olson, Andrew Pawley, Ernest L. Richert, N.P. Thomson, Randolph Upia, Harry Weimer, Natalia Weimer.

No.30. LOVING, Richard and Aretta LOVING Awa dictionary. 1975; xlv+203pp. (Hardbound: incl. 1 map). ISBN 0 85883 137 6

No.31. NGUYỄN ĐĂNG LIÊM, ed. South-East Asian linguistic studies, vol.1. 1974; vii+213pp. (Hardbound). Reprinted 1978. ISBN 0 85883 144 9 and ISBN 0 85883 099 X
Articles by Marybeth Clark, Arthur G. Crisfield, Soenjono Dardjowidjojo, Cesar A. Hidalgo, Philip N. Jenner, Nguyễn Đăng Liêm, Saveros Pou.

No.32. TRYON, D.T. Daly Family languages, Australia. 1974; xvii+305pp. (Hardbound: incl. 1 map). Reprinted 1980. ISBN 0 85883 106 6

No.33. WURM, S.A. and B. WILSON English finderlist of reconstructions in Austronesian languages (post-Brandstetter). 1975; xxxii+246pp. (Hardbound). Reprinted 1978. ISBN 0 85883 129 5

No.34. GUY, J.B.M. Handbook of Bichelamar - Manuel de Bichelamar. 1974; iii+256pp. (Hardbound). Reprinted 1975, 1979. ISBN 0 85883 109 0

No.35. KEESING, R.M. Kwaio dictionary. 1975; xxxv+296pp. (Hardbound: incl. 1 map). Reprinted 1981. ISBN 0 85883 120 1

Series C - Books (continued)

No.36. REID, Lawrence A. Bontok-English dictionary. 1976; xxiii+500pp. (Hardbound). ISBN 0 85883 145 7

No.37. RENCK, G.L. Yagaria dictionary, with English index. 1977; xxix+327pp. (Hardbound: incl. 1 map). ISBN 0 85883 161 9

No.38. WURM, S.A., ed. New Guinea area languages and language study, vol.1: Papuan languages and the New Guinea linguistic scene. 1975; xlvi+1038pp. (Hardbound: incl. 28 maps). Reprinted 1977. ISBN 0 85883 131 7 and ISBN 0 85883 132 5
Articles by A. Capell, T.E. Dutton, Karl J. Franklin, Harland B. Kerr, D.C. Laycock, K.A. McElhanon, Evelyn M. Todd, C.L. Voorhoeve, S.A. Wurm, John A. Z'graggen.

No.39. WURM, S.A., ed. New Guinea area languages and language study, vol.2: Austronesian languages. 1976; xxxv+736pp. (Hardbound: incl. 21 maps). Reprinted 1979. ISBN 0 85883 131 7 and ISBN 0 85883 155 4
Articles by C.H. Beaumont, A. Capell, Ann Chowning, T.E. Dutton, George W. Grace, Alan Healey, Bruce A. Hooley, D.C. Laycock, Peter C. Lincoln, David R. Lithgow, Andrew Pawley, A.J. Taylor, S.A. Wurm, John A. Z'graggen.

No.40. WURM, S.A., ed. New Guinea area languages and language study, vol.3: Language, culture, society, and the modern world. 1977; lxxxvi+1449pp. (Hardbound: incl. 3 maps, 40 photographs), in two fascicles. Reprinted 1981, 1985. ISBN 0 85883 131 7 and ISBN 0 85883 159 7
Articles by C. Abel, Henry L. Bell, Catherine H. Berndt, H. Myron Bromley, H.A. Brown, A. Capell, Lois Carrington, Emily Clarke, Anne M. Cochran, E.W. Deibler Jr, T.E. Dutton, Irenäus Eibl-Eibesfeldt, Franz-Josef Eilers, Joice Franklin, Karl J. Franklin, Paul G. Freyberg, E. Fry, Alan Healey, L.R. Healey, R.K. Johnson, Adrianne Lang, Ranier Lang, Ralph S. Lawton, D.C. Laycock, Peter C. Lincoln, John Lynch, Howard P. McKaughan, Francis Mihalic, John Minogue, Peter Mühlhäusler, A.K. Neuendorf, Ebia Olewale, Andrew Pawley, G.L. Renck, Joan Rule, W.M. Rule, Gillian Sankoff, Robert P. Scott, Peter J. Silzer, A.J. Taylor, W.E. Tomasetti, Donald F. Tuzin, C.L. Voorhoeve, David Y.H. Wu, S.A. Wurm, John A. Z'graggen. Calvin Zinkel.

No.41. FLIERL, W. and H. STRAUSS, eds Kâte dictionary. 1977; xxxv+499pp. (Hardbound: incl. 1 map). ISBN 0 85883 149 X

No.42. NGUYỄN ĐĂNG LIÊM, ed. South-East Asian linguistic studies, vol.2. 1976; iv+262pp. (Hardbound: incl. 2 maps). ISBN 0 85883 144 9 and ISBN 0 85883 143 0
Articles by Paul K. Benedict, G. Diffloth, Eugénie J.A. Henderson, Judith M. Jacob, Philip N. Jenner, Joseph F. Kess, A. Llamzon, Ma. Teresita Martin, Malcolm Warren Mintz, Lili Rabel-Heymann, H.L. Shorto, Sidharta (Sie Ing Djiang), John U. Wolff.

No.43. SMALLEY, William A., ed. Phonemes and orthography: language planning in ten minority languages of Thailand. 1976; xiii+347pp. (Hardbound) ISBN 0 85883 144 9
Articles by C.W. Callaway, Lois Callaway, Joseph R. Cooke, David Filbeck, David Hogan, E.R. Hope, J. Edwin Hudspith, Beulah M. Johnston, James A. Morris, Donald Schlatter, William A. Smalley, Peter Wyss.

No.44. ZORC, David Paul The Bisayan dialects of the Philippines: subgrouping and reconstruction. 1977; xxiii+328pp. (Hardbound: incl. 9 maps). ISBN 0 85883 157 0

No.45. NGUYỄN ĐĂNG LIÊM, ed. South-East Asian linguistic studies, vol.3. 1979; ix+326pp. (Hardbound) + 3 maps. ISBN 0 85883 144 9 and ISBN 0 85883 177 5
Articles by A. Capell, Soenjono Dardjowidjojo, Raleigh Ferrell, Jackson T. Gandour, Eugénie J.A. Henderson, Joseph F. Kess, Nguyễn Đăng Liêm, A. Kemp Pallesen, Alejandrino Q. Perez, Lawrence A. Reid, Alfonso O. Santiago, Patricia Stanley, Norman H. Zide, R. David Zorc.

Series C - Books (continued)

No.46. HEALEY, Phyllis and Alan HEALEY Telefol dictionary. 1977; xix+358pp. (Hardbound). ISBN 0 85883 160 0

No.47. PEREZ, A.Q., A.O. SANTIAGO and NGUYỄN ĐĂNG LIÊM, eds
Papers from the Conference on the Standardisation of Asian Languages, Manila, Philippines, December 16-21, 1974. 1978; ix+386pp. (Hardbound: incl. 1 map). ISBN 0 85883 176 7
Articles by Abdullah Hassan, S. Takdir Alisjahbana, Asmah Haji Omar, Nelia G. Casambre, James R. Chamberlain, Sisir Kumar Das, Virgilio G. Enriquez, Andrew Gonzalez, Amran Halim, Astuti Hendrato-Darmosugito, Yahaya Ismail, Hans Kaehler, Harimurti Kridalaksana, Ernest W. Lee, Ferdinand E. Marcos, S.W. Rudjiati Muljadi, Nguyễn Đăng Liêm, Fe T. Otanes, Al Q. Perez, Ponciano B.P. Pineda, Wissanu Rawanking, Jack C. Richards, Alfonso O. Santiago, Takuji Sasaki, Bonifacio P. Sibayan, Hengtse Tu, Lars S. Vikör.

No.48. GONZALEZ, Andrew Pampangan: towards a meaning-based description. 1981; xiii+402pp. (Hardbound) ISBN 0 85883 244 5

No.49. NGUYỄN ĐĂNG LIÊM, ed. South-East Asian linguistic studies, vol.4. 1979; iv+436pp. (Hardbound). ISBN 0 85883 144 9 and ISBN 0 85883 201 1
Articles by Donald F. Barr, Maxwell Cobbey, James T. Collins, Joseph R. Cooke, Anthony Diller, Jack Gandour, John F. Hartmann, SamAng Hiranburana, Lou Hohulin, Mary E. Honts, Hope M. Hurlbut, Philip N. Jenner, Wilaiwan Kanittanan, Michael Kenstowicz, Joseph F. Kess, Anna Kwan-Terry, Nguyễn Đình-Hoà, Patcharin Peyasantiwong, Saveros Pou, Joan M. Rosen, Marmo Soemarmo, Tham Seong Chee, Michael R. Thomas, Udom Warotamasikkhadit.

No.50. TRYON, D.T. New Hebrides languages: an internal classification. 1976; v+545pp. (Hardbound: incl. 7 maps). Reprinted 1979. ISBN 0 85883 152 X

No.51. GLOVER, Warren W., Jessie R. GLOVER and Deu Bahadur GURUNG
Gurung-Nepali-English dictionary, with English-Gurung and Nepali-Gurung indexes. 1977; xiii+316pp. (Hardbound). ISBN 0 85883 147 3

No.52. MÜHLHÄUSLER, Peter Growth and structure of the lexicon of New Guinea Pidgin. 1979; xx+498pp. (Hardbound). Reprinted 1984. ISBN 0 85883 191 0

No.53. FRANKLIN, Karl J. and Joice FRANKLIN, assisted by Yapua KIRAPEASI
A Kewa dictionary, with supplementary grammatical and anthropological materials. 1978; xi+514pp. (Hardbound: incl. 10 maps). ISBN 0 85883 182 1

No.54. WURM, S.A., ed. Australian linguistic studies. 1979; xv+753pp. (Hardbound: incl. 18 maps, 7 illustrations). ISBN 0 85883 185 6
Articles by Barry J. Blake, A. Capell, Lois Carrington, Neil Chadwick, Jeffrey Heath, L.A. Hercus, Geoffrey N. O'Grady, Bruce Rigsby, M.C. Sharpe, Peter Sutton, Michael J. Walsh.

No.55. LYNCH, John Lenakel dictionary. 1977; vii+167pp. ISBN 0 85883 165 1

No.56. CAPELL, A. Futuna-Aniwa dictionary, with grammatical introduction. 1984; iv+252pp. ISBN 0 85883 316 6

No.57. FOX, Charles E. Arosi dictionary. Revised edition with English-Arosi index prepared by Mary Craft. 1978; iv+598pp. (Hardbound: incl. 1 map). ISBN 0 85883 170 8

No.58. THARP, J.A. and Y-Bhăm ĐUÔN-YĂ A Rhade-English dictionary, with English-Rhade finderlist. 1980; xi+271pp. (Hardbound). ISBN 0 85883 217 8

No.59. BAUTISTA, Maria Lourdes S. The Filipino bilingual's competence: a model based on an analysis of Tagalog-English code switching. 1980; vi+386pp. (Hardbound). ISBN 0 85883 212 7

Series C - Books (continued)

No.60. HEATH, Jeffery Basic materials in Mara: grammar, texts and dictionary. 1981; xiii+522pp. (Hardbound: incl. 1 map). ISBN 0 85883 247 X

No.61. WURM, S.A. and Lois CARRINGTON, eds Second International Conference on Austronesian Linguistics: proceedings.
Fascicle one: Western Austronesian 1978; xxii+1-688pp. (Hardbound: incl. 1 map, 2 photographs) Reprinted 1983. ISBN 0 85883 184 8
Articles by Natalia Alieva, J.C. Anceaux, Robert Blust, Alice Cartier, Sandra Chung, Otto Chr. Dahl, Soenjono Dardjowidjojo, Isidore Dyen, Raleigh Ferrell, Jo-Ann Flora, Jeanne D. Gibson, A. Hakim Usman, R. Hardjadibrata, Hans Kähler, Joseph F. Kess, Don Laycock, Paul Jen-kuei Li, Paz Buenaventura Naylor, D.J. Prentice, Lawrence A. Reid, J.P. Sarumpaet, U. Sirk, H. Steinhauer, Claude Tchekhoff, Michael R. Thomas, John W.M. Verhaar, François Zacot, R. David Zorc.
Fascicle two: Eastern Austronesian. 1978; xxii-xxvi+688-1497pp. (Hardbound: incl. 6 maps) Reprinted 1983. ISBN 0 85883 184 8
Articles by David G. Arms, Bruce G. Biggs, Ann Chowning, Ross Clark, Anne Cochran, Tom Dutton, Bryan Ezard, Jacques Bernard Michel Guy, S.P. Harrison, Marianne Haslev, Raymond L. Johnston, Yves Lemaître, P.C. Lincoln, John Lynch, Donald S. Marshall, Rodney F. Moag, Peter Mühlhäusler, Andrew Pawley, Albert J. Schütz, William J. Seiter, Andrew Taylor, Evelyn M. Todd, D.T. Tryon, D.S. Walsh, S.A. Wurm.

No.62. SCOTT, Graham Fore dictionary. 1980; xiii+243pp. (Hardbound: incl. 1 map). ISBN 0 85883 226 7

No.63. BROMLEY, H. Myron A grammar of Lower Grand Valley Dani. 1981; xiv+424pp. (Hardbound). ISBN 0 85883 223 2

No.64. COPPELL, W.G. Austronesian and other languages of the Pacific and South-East Asia: an annotated catalogue of theses and dissertations. 1981; xiii+521pp. (Hardbound) ISBN 0 85883 238 0

No.65. RANBY, Peter A Nanumea lexicon. 1980; xi+243pp. (Hardbound). ISBN 0 85883 227 5

No.66. WURM, S.A. and Shirô HATTORI, eds Language atlas of the Pacific area, part 1: New Guinea area, Oceania, Australia. 1981; ii+74pp. (incl. 25 multicoloured maps, appropriate text materials, indexes). (Boxed set) ISBN 0 85883 239 9 and ISBN 0 85883 240 2 (Distributed by GeoCenter, Honigwiesenstrasse 25, D-7000 Stuttgart 80, Postfach 80 08 30, West Germany. Price DM 250.-)

No.67. WURM, S.A. and Shirô HATTORI, eds Language atlas of the Pacific area, part 2: Japan area, Philippines and Formosa, mainland and insular South-east Asia. 1983; ii+72pp. (incl. 23 multicoloured maps, appropriate text materials, indexes). ISBN 0 85883 239 9 and ISBN 0 85883 290 9 (Distributed by GeoCenter, Honigwiesenstrasse 25, D-7000 Stuttgart 80, Postfach 80 08 30, West Germany. Price DM 250.-)

No.68. STREICHER, J.-F. Jabêm-English dictionary. 1982; xii+674pp. (Hardbound: incl. 1 map). ISBN 0 85883 274 7

No.69. CAPELL, A. and H.H.J. COATE Comparative studies in Northern Kimberley languages. 1984; xvi+258pp. (incl. 1 map). ISBN 0 85883 314 X

No.70. WURM, S.A. and P. Mühlhäusler, eds Handbook of Tok Pisin (New Guinea Pidgin). Languages for intercultural communication in the Pacific area project of the Australian Academy of the Humanities, publication No.1. 1985; iv+725pp. (Hardbound). ISBN 0 85883 321 2
Articles by Tom Dutton; Susanne Holzknecht; Don Laycock; P. Mühlhäusler; Julie Piau; Malcolm Ross; Jeff Siegel; S.A. Wurm.

No.71. WORDICK, F.J.F. The Yindjibarndi language. 1982; xii+390pp. (Hardbound: incl. 1 map). ISBN 0 85883 265 8

No.72. TRYON, D.T. and B.D. HACKMAN Solomon Islands languages: an internal classification. 1983; viii+490pp. (Hardbound: incl. 5 maps). ISBN 0 85883 292 5

Series C - Books (continued)

No.73. FERRELL, Raleigh Paiwan dictionary. 1982; x+503pp. (Hardbound). ISBN 0 85883 264 X

No.74. HALIM, Amran, Lois CARRINGTON and S.A. WURM, eds Papers from the Third International Conference on Austronesian Linguistics. vol.1: Currents in Oceanic. 1982. vi+314pp. (incl. 8 maps). ISBN 0 85883 285 2; 0 85883 271 2
Articles by Tom Dutton, Jacques B.M. Guy, S.P. Harrison, Raymond L. Johnston, Don Laycock, John Lynch, Malcolm Ross, D.T. Tryon, D.S. Walsh.

No.75. HALIM, Amran, Lois CARRINGTON and S.A. WURM, eds Papers from the Third International Conference on Austronesian Linguistics. vol.2: Tracking the travellers. 1982; vi+331pp. (incl. 3 maps). ISBN 0 85883 285 2; 0 85883 275 5
Articles by J.C. Anceaux, James T. Collins, Isidore Dyen, Farid M. Onn, Mark Harvey, Hans Lapoliwa, Paul Jen-kuei Li, Teodore A. Llamzon, J. Noorduyn, Andrew K. Pawley, Lawrence A. Reid, Nicole Revel-Macdonald, Mangantar Simanjuntak, Stanley Starosta, C.L. Voorhoeve, John U. Wolff, Colin Yallop, R. David Zorc.

No.76. HALIM, Amran, Lois CARRINGTON and S.A. WURM, eds Papers from the Third International Conference on Austronesian Linguistics. vol.3: Accent on variety. 1982; vi+324pp. (incl. 48 maps). ISBN 0 85883 285 2; 0 85883 281 X
Articles by Ross Clark, Precy Espiritu-Reid, James J. Fox, C.D. Grijns, Kay Ikranagara, Joseph F. Kess, E.A. Kondrashkina, Threes Y. Kumanireng, Bernd Nothofer, D.J. Prentice, J.P. Sarumpaet, Gary F. Simons, Istiati Sutomo, KMA M. Usop, Roland Walker.

No.77. HALIM, Amran, Lois CARRINGTON and S.A. WURM, eds Papers from the Third International Conference on Austronesian Linguistics, vol.4: Thematic variation. 1983; viii+415pp. (incl. 6 maps). ISBN 0 85883 285 2; 0 85883 304 2
Articles by Natalia F. Alieva, Azhar M. Simin, Wayan Bawa, Joel Bradshaw, Alice Cartier, Terry Crowley, Soenjono Dardjowidjojo, Raleigh J. Ferrell, R. Hardjadibrata, Marit Kana, Bambang Kaswanti Purwo, Keith McCune, Tamsin Medan, Claire Moyse-Faurie, I Gusti Ngurah Bagus, Françoise Ozanne-Rivierre, Ramelan, Sri Wulan Rujiati Mulyadi, Soedjarwo, Dendy Sugono, Ignatius Suharno, Michael R. Thomas, Henny Lomban Ticoalu, E.M. Uhlenbeck, John W.M. Verhaar, Husein Widjajakusumah, Yeoh Chiang Kee.

No.78. KING, Julie K. and John Wayne KING, eds Languages of Sabah: a survey report. 1984; vi+359pp. (incl. 39 maps). ISBN 0 85883 297 6

No.79. LYNCH, J. ed., Studies in the languages of Erromango. 1983; vii+222pp. (incl 2 maps). ISBN 0 85883 284 4

No.80. BENDER, Byron W., ed. Studies in Micronesian linguistics. 1984; xii+515pp. (incl. 1 map) ISBN 0 85883 307 7
Articles by Byron W. Bender, Jo-Ann Flora, Sheldon P. Harrison, Robert W. Hsu, Frederick H. Jackson, Roderick A. Jacobs, John Thayer Jensen, Lewis S. Josephs, Kee-dong Lee, Ann M. Peters, Kenneth Rehg, Ho-min Sohn, Anthony F. Tawerilmang, Judith W. Wang.

No.81. BRUCE, Les The Alamblak language of Papua New Guinea (East Sepik). 1984; vi+361pp. (Hardbound: incl. 2 maps). ISBN 0 85883 303 4

No.83. MORRIS, Cliff Tetun-English dictionary. 1984; xx+194pp. (incl. 1 map). ISBN 0 85883 308 5

No.84. BROWN, Herbert A. A comparative dictionary of Orokolo, Gulf of Papua. 1986; xxi+254pp. (incl. 1 map). ISBN 0 85883 317 4

Series C - Books (continued)

No.85. CHEN, Teresa M. Verbal constructions and verbal classification in Nataoran-Amis. 1985; iii+297pp. (incl. 4 maps). ISBN 0 85883 331 X

No.86. RENSCH, Karl H. Tikisionalio fakauvea-fakafalani — Dictionnaire wallisien-français. 1984; Special Number; xiv+439pp. (incl. 1 map). ISBN 0 85883 310 7

No.87. THURGOOD, Graham, James A. MATISOFF, David BRADLEY, eds, with the assistance of Grace Shiang-Jiun Lin and Keith Record. Linguistics of the Sino-Tibetan area: the state of the art. Papers presented to Paul K. Benedict for his 71st birthday. 1985; vii+498pp. ISBN 0 85883 319 0
Articles by William L. Ballard, William H. Baxter III, Alton L. Becker, Nicholas C. Bodman, David Bradley, Christopher Court, Søren Egerod, William J. Gedney, Inga-Lill Hansson, Mantaro J. Hashimoto, André-Georges Haudricourt, Eugénie J.A. Henderson, Franklin E. Huffman, F.K. Lehman, Charles N. Li, Lorenz G. Löffler, James A. Matisoff, Martine Mazaudon, Tsu-li Mei, Boyd Michailovsky, Yasuhiko Nagano, Nguyễn Đình-hoà, Tatsuo Nishida, Jerry Norman, A. Schüssler, R.K. Sprigg, Sandra A. Thompson, Graham Thurgood, Julian K. Wheatley, Paul Fu-mien Yang.

No.88. PAWLEY, Andrew and Lois CARRINGTON, eds Austronesian linguistics at the 15th Pacific Science Congress. 1985; iv+353pp. (incl 2 maps). ISBN 0 85883 329 8
Articles by Byron W. Bender, Joel Bradshaw, Ann Chowning, Ross Clark, George W. Grace, Robin Hooper, Robert Hsu, Paul Jen-kuei Li, Frantisek Lichtenberk, Lamont Lindstrom, John Lynch, Stanley Starosta, D.T. Tryon, D.S. Walsh, Judith W. Wang, Jack H. Ward.

No.89. HARRIS, J.W. Northern Territory pidgins and the origin of Kriol. 1986; vii+418pp. (incl. 8 maps). ISBN 0 85883 334 4

No.90. RENSCH, Karl H. ed. Tikisionalio fakafutuna-fakafalani — Dictionnaire futunien-français. 1986; Special Number; xi+327pp. (incl. 1 map). ISBN 0 85883 348 4

No.91. CROWLEY, Susan Smith Tolo dictionary. 1986; xii+107pp. ISBN 0 85883 346 8

No.92. CLYNE, Michael, ed., Australia, meeting place of languages. 1985; v+328pp. (incl. 3 maps). ISBN 0 85883 330 1
Articles by Edith Bavin, Camilla Bettoni, Maya and David Bradley, Michael Clyne, John Harris, Malcolm Johnston, Susan Kaldor, Manfred Klarberg, Patrick McConvell, Ian G. Malcolm, Peter Mühlhäusler, J.V. Neustupný, Uldis Ozolins, Anne Pauwels, Marta Rado, John Sandefur, Annette Schmidt, M.J. Secombe, Anna Shnukal, Tim Shopen, J.J. Smolicz.

No.93. GERAGHTY, Paul, Lois CARRINGTON and S.A. WURM, eds FOCAL I: papers from the Fourth International Conference on Austronesian Linguistics. 1986; x+403pp. (incl 1 map, 3 photographs). ISBN 0 85883 343 3; 0 85883 344 1
Articles by David G. Arms, Niko Besnier, Susanna Cumming, Otto Chr. Dahl, Videa P. De Guzman, Carol Georgopoulos, Volker Graefe, Ray Harlow, Robin Hooper, Bambang Kaswanti Purwo, Paul R. Kroeger, Juliette Levin, Diane Massam, G.B. Milner, Susan Mordechay, Paz Buenaventura Naylor, Stanley Starosta, Hein Steinhauer, Geraldine Triffitt, Fay Wouk, Ayako Yasuda-Graefe, R. David Zorc.

Series C - Books (continued)

No.94. GERAGHTY, Paul, Lois CARRINGTON and S.A. WURM, eds FOCAL II: papers from the Fourth International Conference on Austronesian Linguistics. 1986; vi+463pp. (incl. 15 maps, 4 photographs). ISBN 0 85883 343 3; 0 85883 345 X
Articles by Ann Chowning, Ross Clark, James T. Collins, Tom Dutton, Isidore Dyen, Paul Geraghty, George W. Grace, S.P. Harrison, Even Hovdhaugen, Frederick H. Jackson, Paul Jen-kuei Li, John Lynch, Bernd Nothofer, A.K. Ogloblin, Malcolm Ross, J.P. Sarumpaet, Jeff Siegel, Geoff P. Smith, J.N. Sneddon, D.T. Tryon, Shigeru Tsuchida, R. David Zorc.

No.95. LINDSTROM, Lamont Kwamera dictionary - N̈ikukua Sai Nagkiariien N̈inin̈ife. 1986; ix+195pp. (incl. 1 map). ISBN 0 85883 340 9

IN PREPARATION:

LAYCOCK, D.C. Basic materials in Buin: grammar, texts and dictionary.

WURM, S.A., John G. MEALUE and John Ini LAPLI and Frank Bollen Yöpusë Northern Santa Cruzan dictionary, Solomon Islands.

WURM S.A., Patrick BWAKOLO and Martin MOYIYO Äyiwo dictionary, Reef Islands, Solomon Islands.

LEE, Jennifer R. Tiwi today: a study of language change in a contact situation.

HODDINOTT, W.G. and F.M. KOFOD The Ngankikurungkurr language (Daly River area, Northern Territory).

SERIES D – SPECIAL PUBLICATIONS

(BULLETINS, ARCHIVAL MATERIALS AND OTHER PUBLICATIONS)

No. 1. Bulletin No.1. 1964; 9pp. ISBN 0 85883 072 8
Contributions by A. Capell, R.D. Eagleson, E.H. Flint, Susan Kaldor, J. Lyons, S.A. Wurm.

No. 2. Bulletin No.2. 1965; v+84pp. ISBN 0 85883 073 6
Contributions by J.R. Bernard, H. Bluhme, Christopher A.F. Court, Robert R. Dyer, E.H. Flint, F.W. Harwood, Susan Kaldor, E.M. Liggins, A. Murtonen, Anita Pincas, Hans Pollak, C.W. Ruhle, R.J. Zatorski.

No. 3. WURM, S.A. New Guinea Highlands Pidgin: course materials. 1971; vii+175pp. ISBN 0 85883 074 4

No. 4. WURM, S.A. Languages: Eastern, Western and Southern Highlands, Territory of Papua & New Guinea. (Map in fourteen colours.) 1961. ISBN 0 85883 075 2

No. 5. LAYCOCK, Don Materials in New Guinea Pidgin (Coastal and Lowlands). 1970; xxxvii+62pp. Reprinted 1974. ISBN 0 85883 076 0

No. 6. NGUYỄN ĐĂNG LIÊM Four-syllable idiomatic expressions in Vietnamese. 1970; v+60pp. ISBN 0 85883 077 9

No. 7. ELBERT, S.H. Three legends of Puluwat and a bit of talk. 1971; ix+85pp. (incl. 1 map, 1 photograph). ISBN 0 85883 078 7

No. 8. LANG, Adrianne, Katherine E.W. MATHER and Mary L. ROSE Information storage and retrieval: a dictionary project. 1972; vii+151pp. ISBN 0 85883 087 6

No. 9. PACIFIC LINGUISTICS Index to Pacific Linguistics, Series A-D, as at the end of 1970. 1971; iv+75pp. ISBN 0 85883 079 5

No.10. PATON, W.F. Tales of Ambrym. 1971; xii+82pp. (incl. 1 map). Reprinted 1978. ISBN 0 85883 080 9

No.11. WURM, S.A., ed., with P. BRENNAN, R. BROWN, G. BUNN, K. FRANKLIN, B. IRWIN, G. SCOTT, A. STUCKY, and other members of the Summer Institute of Linguistics, New Guinea Branch Language maps of the Highlands Provinces, Papua New Guinea. 1978; iii+21pp. (incl. 6 maps). ISBN 0 85883 171 6

No.12. DUTTON, T.E. Conversational New Guinea Pidgin. 1973; xviii+292pp. Reprinted 1974, 1977, 1979, 1981. ISBN 0 85883 096 5
Revised course available. See D67.

No.13. GLOVER, Jessie R. and Deu Bahadur GURUNG Conversational Gurung. 1979; vii+216pp. ISBN 0 85883 192 9

No.14. BARNETT, Gary L. Handbook for the collection of fish names in Pacific languages. 1978; v+101pp. (incl. 1 map, 47 photographs, 3 drawings). ISBN 0 85883 175 9

No.15. TRYON, D.T. & R. GÉLY, eds Gazetteer of New Hebrides place names / Nomenclature des noms géographiques des Nouvelles-Hébrides. 1979; xxxiii+155pp. (incl. 1 map). ISBN 0 85883 194 5

No.16. YOUNG, Maribelle Bwaidoka tales. 1979; viii+136pp. (incl. 1 map). ISBN 0 85883 200 3

No.17. STOKHOF, W.A.L., ed. ...with Lia SALEH-BRONKHORST Holle lists: vocabularies in languages of Indonesia, vol.1: Introductory volume. (Materials in languages of Indonesia, No.1: W.A.L. Stokhof, Series ed.) 1980; v+149pp. (incl. 2 maps). Reprinted 1981. ISBN 0 85883 213 5 and ISBN 0 85883 214 3

Series D - Special Publications (continued)

No.18. STANHOPE, John M. The language of the Rao people, Grengabu, Madang Province, Papua New Guinea. 1980; vii+28pp. (incl. 3 maps, 5 photographs). ISBN 0 85883 222 4

No.19. STOKHOF, W.A.L. Woisika I: an ethnographic introduction. 1977: ix+74pp. (incl. 3 maps). Reprinted 1980. ISBN 0 85883 167 8

No.20. CAPELL, A. and J. LAYARD Materials in Atchin, Malekula: grammar, vocabulary and texts. 1980; v+260pp. (incl. 1 map). ISBN 0 85883 231 3

No.21. SCHEBECK, B. Texts on the social system of the At^{y}n^{y}amatana people, with grammatical notes. 1974; xviii+278pp. + 1 photograph. ISBN 0 85883 102 3

No.22. PATON, W.F. Customs of Ambrym (texts, songs, games and drawings). 1979; xv+98pp. (incl. 1 map, 4 photographs). ISBN 0 85883 189 9

No.23. CLYNE, Michael, ed. Australia talks: essays on the sociology of Australian immigrant and aboriginal languages. 1976; viii+244pp. Reprinted 1978, 1980, 1983. ISBN 0 85883 148 1
Articles by M. Anne Bolitho, Michael Clyne, Robert D. Eagleson, R. McL. Harris, Ruth Johnston, Susan Kaldor, Manfred Klarberg, Stephen Muecke, Marta Rado, John Sandefur, Margeret C. Sharpe, J.J. Smolicz, Bruce A. Sommer, Brian A. Taylor, Elizabeth Thuan, Darrell T. Tryon.

No.24. DUTTON, T.E. and C.L. VOORHOEVE Beginning Hiri Motu. 1974; xvii+259pp. Set of 6 cassettes (optional). Reprinted 1975. ISBN 0 85883 112 0

No.25. Z'GRAGGEN, John A. The languages of the Madang District, Papua New Guinea. (Map) 1973. ISBN 0 85883 105 8

No.26. LAYCOCK, D. Languages of the Sepik Region, Papua New Guinea. (Map) 1975. ISBN 0 85883 136 8

No.27. WURM, S.A. Spreading of languages in the South-western Pacific. (Map) 1975. ISBN 0 85883 127 9

No.28. STOKHOF, W.A.L., ed., ...with Lia SALEH-BRONKHORST Holle lists: vocabularies in languages of Indonesia, vol.2: Sula and Bacan Islands, North Halmahera, South and East Halmahera. (Materials in languages of Indonesia, No.2: W.A.L. Stokhof, Series ed.) 1980; iv+325pp. ISBN 0 85883 213 5 and ISBN 0 85883 218 6

No.29. DUTTON, Tom Queensland Canefields English of the late nineteenth century (a record of interview with two of the last surviving Kanakas in North Queensland, 1964). 1980; xiii+147pp. (incl. 3 maps, 2 photographs). ISBN 0 85883 224 0

No.30. Z'GRAGGEN, J.A. A comparative word list of the Rai Coast languages, Madang Province, Papua New Guinea. 1980; xv+181pp. (incl. 1 map). ISBN 0 85883 232 1

No.31. Z'GRAGGEN, J.A. A comparative word list of the Northern Adelbert Range languages, Madang Province, Papua New Guinea. 1980; xvi+178pp. (incl. 1 map). ISBN 0 85883 228 3

No.32. Z'GRAGGEN, J.A. A comparative word list of the Mabuso languages, Madang Province, Papua New Guinea. 1980; xv+184pp. (incl. 1 map). ISBN 0 85883 233 X

No.33. Z'GRAGGEN, J.A. A comparative word list of the Southern Adelbert Range languages, Madang Province, Papua New Guinea. 1980; xvi+97pp. (incl. 1 map). ISBN 0 85883 234 8

Series D - Special Publications (continued)

No.34. LAPOLIWA, Hans A generative approach to the phonology of bahasa Indonesia. (Materials in languages of Indonesia, No.3: W.A.L. Stokhof, Series ed.) 1981; v+155pp. ISBN 0 85883 245 3

No.35. STOKHOF, W.A.L., ed., ...with Lia SALEH-BRONKHORST and Alma E. ALMANAR Holle lists: vocabularies in languages of Indonesia, vol.3/1: Southern Moluccas; Central Moluccas: Seram (1). (Materials in languages of Indonesia, No.4: W.A.L. Stokhof, Series ed.) 1981; iv+201pp. (incl. 1 map). ISBN 0 85883 213 5; 0 85883 242 9; 0 85883 243 7.

No.36. HALIM, Amran Intonation in relation to syntax in Indonesian. (Materials in languages of Indonesia, No.5: W.A.L. Stokhof, Series ed.) 1981; vii+149pp. ISBN 0 85883 246 1

No.37. NABABAN, P.W.J. A grammar of Toba-Batak. (Materials in languages of Indonesia, No.6: W.A.L. Stokhof, Series ed.) 1981; xxiv+146pp. (incl. 2 maps). ISBN 0 85883 254 2

No.38. POEDJOSOEDARMO, Soepomo Javanese influence on Indonesian. (Materials in languages of Indonesia, No.7: W.A.L. Stokhof, Series ed.) 1982; viii+187pp. (incl. 1 map). ISBN 0 85883 261 5

No.39. KARTOMIHARDJO, Soeseno Ethnography of communicative codes in East Java. (Materials in languages of Indonesia, No.8: W.A.L. Stokhof, Series ed.) 1981; xi+212pp. (incl. 1 map). ISBN 0 85883 255 0

No.40. CARRINGTON, Lois and Miriam CURNOW Twenty years of Pacific Linguistics: an index of contributions to Pacific linguistic studies 1961-1981. 1981; vi+161pp. ISBN 0 85883 249 6

No.41. STOKHOF, W.A.L. Woisika riddles. (Materials in languages of Indonesia, No.9: W.A.L. Stokhof, Series ed.) 1982; iii+74pp. (incl. 2 maps). ISBN 0 85883 257 7

No.42. McGREGOR, Donald E. and Aileen McGREGOR Olo language materials. 1982; viii+155pp. ISBN 0 85883 262 3

No.43. VERHEIJEN. J.A.J. Dictionary of Manggarai plant names. 1982; iii+140pp. (incl. 1 map). ISBN 0 85883 273 9

No.44. STOKHOF, W.A.L., ed., ...with Lia SALEH-BRONCKHORST and Alma E. ALMANAR Holle lists: vocabularies in languages of Indonesia, vol.3/2: Central Moluccas: Seram (II). (Materials in languages of Indonesia, No.10: W.A.L. Stokhof, Series ed.) 1981; iv+207pp. ISBN 0 85883 213 5; 0 85883 242 9; 0 85883 253 4

No.45. SUHARNO, Ignatius A descriptive study of Javanese. (Materials in languages of Indonesia, No.11: W.A.L. Stokhof, Series ed.) 1982; xiv+175pp. ISBN 0 85883 258 5

No.46. VOORHOEVE, C.L., ed. The Makian languages and their neighbours. (Materials in languages of Indonesia, No.12: W.A.L. Stokhof, Series ed.) 1982; viii+148pp. (incl. 4 maps). ISBN 0 85883 277 1
Articles by C.L. Voorhoeve; J.T. Collins (2); D. Teljeur.

No.47. COLLINS, James T. The historical relationships of the languages of Central Maluku, Indonesia. (Materials in languages of Indonesia, No.13: W.A.L. Stokhof, Series ed.) 1983; ix+168pp. (incl. 10 maps). ISBN 0 85883 289 5

No.48. TAMPUBOLON, Daulat Purnama Verbal affixations in Indonesian: a semantic exploration. (Materials in languages of Indonesia, No.14: W.A.L. Stokhof, Series ed.) 1983; v+156pp. (incl. 1 map). ISBN 0 85883 280 1

Series D - Special Publications (continued)

No.49. STOKHOF, W.A.L., ed., ...with Lia SALEH-BRONCKHORST and Alma E. ALMANAR Holle lists: vocabularies in languages of Indonesia, vol.3/3: Central Moluccas: Seram (III); Haruku; Banda; Ambon (I). (Materials in languages of Indonesia No.15: W.A.L. Stokhof, Series ed.) 1982; vi+214pp. ISBN 0 85883 213 5; 0 85883 242 9; 0 85883 288 7

No.50. STOKHOF, W.A.L., ed., ...with Lia SALEH-BRONCKHORST and Alma E. ALMANAR Holle lists: vocabularies in languages of Indonesia, vol.3/4: Central Moluccas: Ambon (II); Buru; Nusa Laut; Saparua. (Materials in languages of Indonesia No.16: W.A.L. Stokhof, Series ed.) 1982; iv+179pp. ISBN 0 85883 213 5; 0 85883 242 9; 0 85883 267 4

No.51. STOKHOF, W.A.L., ed., ...with Lia SALEH-BRONCKHORST and Alma E. ALMANAR Holle lists: vocabularies in languages of Indonesia, vol.4: Talaud and Sangir Islands. (Materials in languages of Indonesia No.17: W.A.L. Stokhof, Series ed.) 1982; iv+313pp. (incl. 1 map). ISBN 0 85883 213 5; 0 85883 268 2

No.52. STOKHOF, W.A.L., ed., ...with Lia SALEH-BRONCKHORST and Alma E. ALMANAR Holle lists: vocabularies in languages of Indonesia, vol.5/1: Irian Jaya: Austronesian languages; Papuan languages, Digul area. (Materials in languages of Indonesia No.18: W.A.L. Stokhof, Series ed.) 1982; iv+186pp. (incl. 2 maps). ISBN 0 85883 213 5; 0 85883 269 0; 0 85883 293 3.

No.53. STOKHOF, W.A.L., ed., ...with Lia SALEH-BRONCKHORST and Alma E. ALMANAR Holle lists: vocabularies in languages of Indonesia, vol.5/2: Irian Jaya: Papuan languages, Northern languages, Central Highlands languages. (Materials in languages of Indonesia No.19: W.A.L. Stokhof, Series ed.) 1983; iv+245pp. (incl. 2 maps). ISBN 0 85883 213 5; 0 85883 269 0; 0 85883 294 1

No.54. HOLMER, Nils M. Linguistic survey of south-eastern Queensland. 1983; vii+485pp. ISBN 0 85883 295 X

No.55. DJAWANAI, Stephanus Ngadha text tradition: the collective mind of the Ngadha people, Flores. (Materials in languages of Indonesia No.20: W.A.L. Stokhof, Series ed.) 1983; vii+278pp. (incl. 1 map). ISBN 0 85883 283 6

No.56. AJAMISEBA, Danielo C. A classical Malay text grammar: insights into a non-western text tradition. (Materials in languages of Indonesia No.21: W.A.L. Stokhof, Series ed.) 1983; v+116pp. ISBN 0 85883 286 0

No.57. McELHANON, K.A. A linguistic field guide to the Morobe Province, Papua New Guinea. 1984; iii+67pp. (incl. 1 map). ISBN 0 85883 287 9

No.58. JASPAN, M.A. Materials for a Rejang-Indonesian-English dictionary, with a fragmentary sketch of the Rejang language by W. Aichele, and a preface and additional annotations by P. Voorhoeve. (Materials in languages of Indonesia No. 27: W.A.L. Stokhof, Series ed.) 1984; x+162pp. ISBN 0 85883 312 3

No.59. STOKHOF, W.A.L., ed., ...with Lia SALEH-BRONCKHORST and Alma E. ALMANAR Holle lists: vocabularies in languages of Indonesia, vol.6: The Lesser Sunda Islands (Nusa Tenggara). (Materials in languages of Indonesia No. 22: W.A.L. Stokhof, Series ed.) 1983; iv+337pp. (incl. 2 maps). ISBN 0 85883 213 5; 0 85883 302 6

Series D - Special Publications (continued)

No.60. STOKHOF, W.A.L., ed., ...with Lia SALEH-BRONCKHORST and Alma E. ALMANAR Holle lists: vocabularies in languages of Indonesia, vol.7/2: North Sulawesi: Philippine languages. (Materials in languages of Indonesia No.23: W.A.L. Stokhof, Series ed.) 1983; v+328pp. (incl. 1 map). ISBN 0 85883 213 5; 0 85883 298 4; 0 85883 299 2

No.61. STOKHOF, W.A.L., ed., ... with Lia SALEH-BRONCKHORST and Alma E. ALMANAR Holle lists: vocabularies in languages of Indonesia, vol 7/1: North Sulawesi: Gorontalo group and Tontoli. (Materials in languages of Indonesia No.24: W.A.L. Stokhof, Series ed.) 1984; iii+240pp. (incl. 2 maps). ISBN 0 85883 213 5; 0 85883 298 4; 0 85883 300 X

No.62. STOKHOF, W.A.L., ed., ... with Alma E. ALMANAR Holle lists: vocabularies in languages of Indonesia, vol.7/3: Central Sulawesi, South-west Sulawesi. (Materials in languages of Indonesia No.25: W.A.L. Stokhof, Series ed.) 1984; iv+251pp. (incl. 3 maps). ISBN 0 85883 213 5; 0 85883 298 4; 0 85883 301 8

No.64. GROVES, Terab'ata R., Gordon W. GROVES and Roderick JACOBS Kiribatese: an outline description. 1985; vi+155pp. ISBN 0 85883 318 2

No.65. HARDJADIBRATA, R.R. Sundanese: a syntactical analysis. (Materials in languages of Indonesia No.29: W.A.L. Stokhof, Series ed.) 1985; vi+159pp. (incl. 1 map). ISBN 0 85883 320 4

No.66. STOKHOF, W.A.L., ed., ... with Alma E. ALMANAR Holle lists: vocabularies in languages of Indonesia, vol.7/4: South-East Sulawesi and neighbouring islands, West and North-East Sulawesi. (Materials in languages of Indonesia No.28: W.A.L. Stokhof, Series ed.) 1985; iv+290pp. (incl 4 maps) ISBN 0 85883 213 5; 0 85883 298 4; 0 85883 328 X

No.67. DUTTON, Tom, in collaboration with Dicks THOMAS A new course in Tok Pisin (New Guinea Pidgin) 1985; xxviii+407pp. (incl. 3 maps, 110 photographs). With a set of 14 cassettes (optional). ISBN 0 85883 341 7

No.68. MOELIONO Anton Language development and cultivation: alternative approaches in language planning. (Materials in languages of Indonesia, No.30: W.A.L. Stokhof, Series ed.) 1986:ix+135pp. ISBN 0 85883 332 8

No.69. STOKHOF, W.A.L., ed., ... with Alma E. ALMANAR Holle lists: vocabularies in languages of Indonesia, vol.8: Kalimantan (Borneo). (Materials in languages of Indonesia No.31: W.A.L. Stokhof, Series ed.) 1986; iv+207pp. ISBN 0 85883 213 5; 0 85883 333 6

No.70. VERHEIJEN, Jilis A.J., SVD The Sama/Bajau language in the Lesser Sunda Islands. (Materials in languages of Indonesia No.32: W.A.L. Stokhof, Series ed.) 1986; viii+209pp. (incl. 1 map). ISBN 0 85883 335 2

No.71. STOKHOF, W.A.L., ed., ... with Alma E. ALMANAR Holle lists: vocabularies in languages of Indonesia, vol.9: Northern Sumatra. (Materials in languages of Indonesia No.33, W.A.L. Stokhof, Series ed.) 1985; iv+315pp. (incl 4 maps). ISBN 0 85883 213 5; 0 85883 336 0

IN PREPARATION:

OETOMO, Dédé The Chinese of Pasuruan: their language and identity. (Materials in languages of Indonesia No.26.)

HUSEN ABAS Indonesian as a unifying language of wider communication.

TRYON, Darrel T. Let's talk Bislama

STOKHOF, W.A.L., ed., ... with Alma E. ALMANAR. Holle lists: vocabularies in languages of Indonesia, vol.10.